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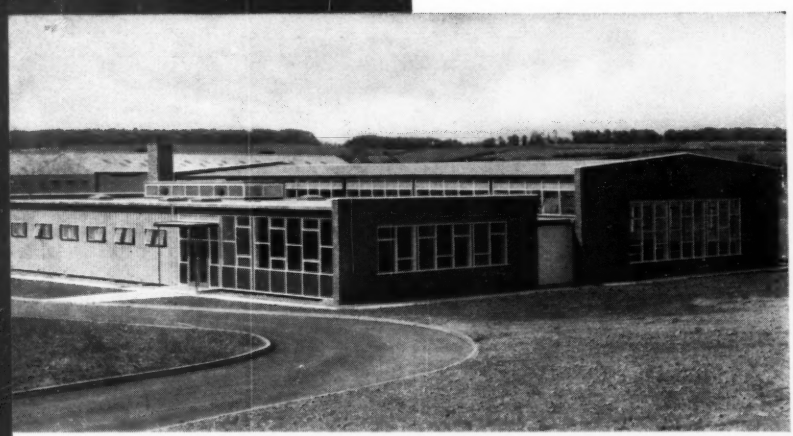

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Education and Industry — 2

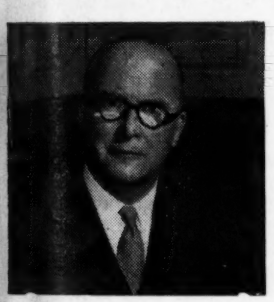
The Education of Technologists

By Sir Lionel Russell, C.B.E., Chief Education Officer, Birmingham

Technical education in industry is one of the important points which will be stressed during National Productivity Year which opened, under the patronage of H.R.H. the Duke of Edinburgh, on November 14. This series of articles, by industrial and educational experts, has been arranged for the* Board of Trade Journal *by the Ministry of Education.

Definition

THE WHITE PAPER on 'Technical Education' that was presented to Parliament in February, 1956, contained the following definition of a technologist: 'A technologist has the qualifications and experience required for membership of a professional institution. . . . A technologist has studied the fundamental principles of his chosen technology and should be able to use his knowledge and experience to initiate practical developments. He is expected to accept a high degree of responsibility and in many cases to push forward the boundaries of knowledge in his own particular field'. In short, he must not only understand the fundamental principles of the sciences on which his technology is based, but he must be capable of applying fresh discoveries in those fields to the service of industry, to the service of mankind.



University Developments

In fundamental thinking, speculative research, and inventiveness, Great Britain has never had any shortage of brains. She has not, however, in all fields been quick to adapt the discoveries of the scientists to technological advance, that is to say, to swift economic production. Yet upon the latter depend the export of goods at competitive prices and, directly and indirectly, the standards of living of the nation. During the fifties, therefore, the Government took various major steps to increase the output of technologists. Notable among these have been the large-scale development of the Imperial College of Science and Technology and also major developments at Glasgow (at both the University and the Royal College of Science and Technology), Manchester (at both the University and the College of Science and Technology), Leeds and Birmingham. It is, however, with part of the complementary contribution that the colleges of advanced technology and the other technical colleges are making that this article deals.

A Report on Comparative Costs of Contour Milling by Electronic Control and Conventional Methods is published as a Supplement to this issue on pages *i* - *xvi* under the title: 'ELECTRONIC CONTROL OF MACHINE TOOLS FOR CONTOUR MILLING'.

The Higher National Certificate

The 1956 White Paper stated that the then annual output from advanced courses in technical colleges in England and Wales was about 9,500 (including roughly 1,000 who gained degrees in science and about 500 who gained degrees in technology). The overwhelming majority of the remainder were part-time students who had obtained Higher National Certificates after part-time study, simultaneous with their employment, from which they often enjoyed day-release, lasting for at least five years from the age of sixteen. Many of these students, after further study, subsequently obtain complete exemption from the examinations of professional institutions. This is a hard way to become a qualified technologist and many fall by the wayside. Those who display the necessary single-mindedness of purpose and persistence are to be greatly admired and have often in the past been highly spoken of by industry. In particular they are said to be almost in-

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Front Cover Photograph

Pumping installation for handling crude sewage and storm water is controlled automatically with equipment built by M.T.E. Control Gear Ltd., of Leigh-on-Sea, Essex, and represents one of the many applications for their wide range of control equipment. M.T.E. export to many countries and have associate companies assembling and manufacturing control equipment in Canada and Australia. Current contracts include control equipment for heavy capital plant for export to the Soviet Union, Bulgaria and Poland.

The Education of Technologists (*Continued*)

variably hard workers and to have their feet on the ground, which is naturally not always true of the young man who has arrived in industry straight from the university. But there is some evidence that the outlook of men trained in this way is not always as broad as is necessary today, which is hardly surprising in view of the fact that the content of part-time courses is compelled by the very nature of the courses to be severely limited and that attendance at such courses has often made severe inroads into the social life of the students.

The National Council for Technological Awards

In 1954 the Rt. Hon. Sir David Eccles, as he then was, was appointed Minister of Education. He did not take long to reach the conclusion that for several purposes the existing national awards and the courses leading to them were no longer of the right calibre. They were either too low in standard or too narrow in content. He was doubtless much influenced by reports of the National Advisory Council on Education for Industry and Commerce under the chairmanship of the late Lord Weeks which were prepared after consultation with both sides of industry, the local education authorities and the teachers in technical colleges. These reports urged the establishment in technical colleges of more high level courses and in particular of more sandwich courses. The Minister accordingly appointed an independent National Council to create and administer awards for successful technological students in technical colleges under the then chairmanship of Lord Hives, the Chairman of Rolls Royce.

The Diploma in Technology

This new body lost no time in getting to work and in May, 1956 was able to circulate information about what the Council would require of a course before it approved it as leading to the Council's first award, the Diploma in Technology. The courses were to be equivalent in standard to honours degree courses of a British university and, therefore, the Council's requirements concerned such fundamental matters as the location of courses in colleges that provided a substantial programme of advanced studies, the standard of admission to the courses, their length and nature, the depth and breadth of the syllabuses, the quality of the teaching staff, the adequacy of the accommodation (including the library and social amenities) and equipment – and in particular the provision of facilities for a student's own project – and the arrangements made by the college for the examination of their students, including in particular the approval, by the Council of the college's external examiners. This is how the Council set about encouraging the development of high-level broadly based courses and rewarding successful students in them by granting them an award of national currency, the Diploma in Technology. The national currency was soon confirmed by the action of the Committee of Vice-Chancellors and Principals in strongly recommending to universities in the United Kingdom that, in suitable cases, holders of the Diploma in Technology should be on the same footing as holders of first degrees when applications for admission to courses of study for higher degrees were being considered.

Integration of Industrial Training and Academic Study

Of particular interest to industry are the requirements that the courses must include a thorough education in the fundamentals of science and technology and their application to development and design, and also liberal studies and some instruction in the principles of industrial organization. Most significant of all are the requirements that the courses should include a substantial period or periods of suitable industrial training and that the industrial training and academic study should be mutually relevant. The first report of the National Council for Technological Awards indeed includes the following paragraph on the 'Integration of Academic and Practical Training':

> 'The Council regard a course leading to the Diploma in Technology as a complete entity, the industrial training being just as much a part of the course as the academic study. Each firm will, of course, have its own training arrangements, and the Council imagine that few Principals will be in the happy position where students' industrial training provides a precise complement to their academic studies. On the other hand, college staff are expected to know what a student is doing during his industrial training just as the works staff must know the content of the college course, and the Council hope that each side will move gradually towards dovetailing the two together. In their teaching the college staff can take advantage of the students' relevant industrial experience and, in the same way, the works programme can be based on the students'

The Education of Technologists (*Continued*)

academic studies. A significant development, for example, might well be that the project on which a student works during his academic course will arise from his works experience. The implementation of these ideas obviously necessitates close contact between college staff and the training officer of the firm employing the student . . .

The Council appreciate that what is said above will not be easy to implement, particularly where students come from a number of small firms. Nevertheless, they feel it to be vital that the colleges and industry should try very hard to bring about the developments mentioned above. In fact, it may well be that this joint and closely integrated training of a student will prove to be one of the outstanding and unique features of courses leading to the Diploma in Technology.'

Increase in Number of Sandwich Courses

The rate of scientific and technological progress, the current needs of industry and of the country in the light of that progress, the decision of the Government to approve the necessary capital investment for the additional accommodation and equipment required by the technical colleges, the action of the Ministry in bringing about the establishment of new national awards, their decision to designate certain colleges as colleges of advanced technology and the enthusiasm of technical college principals and their staffs to plan with industry new courses have led to a rapid development of sandwich courses in technical colleges in England and Wales. A few of these courses lead to university degrees, an increasing number to the Higher National Diploma (these courses are normally one year shorter than courses leading to the Diploma in Technology), a number to college diplomas, but much the largest growth is in the number of courses leading to the Diploma in Technology. The following table, which the Ministry of Education have kindly made available, gives the numbers of sandwich courses and students in England and Wales for the last seven years:

Educational Year	No. of Courses	No. of Students					
		Dip. Tech.	Degree	Nat. Cert. and Diploma	College Diploma	Others	Total
1955-56 . .	103	—	52	1,373	571	331	2,327
1956-57 . .	148	510	207	2,142	728	392	3,979
1957-58 . .	203	1,391	307	3,240	973	581	6,492
1958-59 . .	2o1	2,422	369	3,417	1,256	903	8,367
1959-60 . .	331	3,412	366	3,733	1,477	974	9,962
1960-61 . .	301	4,384	343	3,843	1,365	1,177	11,112
1961-62 . .	377	5,662	306	3,962	1,299	1,678	12,907

All the courses leading to the Diploma in Technology include at least one year of suitable industrial training. Indeed, of the 108 courses recognized on March 31, 1962, 84 comprised alternating periods of academic study and industrial training of six months or less. The courses are in a great variety of subjects, the most common being mechanical and production engineering, electrical engineering, applied chemistry, physics, aeronautical engineering, civil engineering and mathematics.

Scotland

In Scotland the history of the development of technological education outside the unversities has been very different. Owing to factors of geography and population the important centres have long been a relatively small number of central institutions under independent governing bodies. This is in contrast to the English scene where a relatively small number of colleges of advanced technology have only very recently developed from the larger of the very considerable number of colleges maintained or aided by local education authorities. Full-time courses leading to degrees, to the individual college's own diploma or associateship, and to Higher National Diplomas have long formed a very considerable part of the work of the central institutions, and the number of full-time students at them has increased from over 2,000 to over 2,900 in the last six years.

Post-graduate and Post-diploma Awards and Courses

Considerations of space only allow of this article recording and commenting on the development of courses of undergraduate level. There are of course many other ways in which the colleges can be of service to industry. The growth of scientific and technological knowledge has much increased the need for post-graduate and post-diploma courses of varying lengths. Furthermore, in order to encourage holders of the diploma and others with equivalent qualifications to carry out original investigations of problems related to the needs of industry, the Council have established a College of Technologists, membership of which is awarded in respect of programmes of work satisfactorily carried out jointly in industry and at a college. The programmes may be concerned with any technological aspect of industrial activity, such as research, development, design, or production.

Partnership between Industry and the Colleges

It is impossible to over-emphasize the part played by industry in the striking development of sandwich courses. At March 31, 1962, almost 70 per cent. of the students in courses leading to the Diploma in Technology were industry-based, that is to say, industry was employing them and making arrangements for them to attend the colleges for their academic study. Representatives of industry play a valuable part in the government of many colleges and some members of industrial staffs give invaluable help to the colleges by undertaking part-time teaching in them. Above all, industry has a major responsibility in planning, in conjunction with the colleges, the industrial training of the students. If this is to match their college studies the planning has to be done thoroughly. It is however, by such planning, by securing that throughout their courses students shall be seized of the actual or potential relevance of their studies, and by ensuring that, at any rate, during the latter periods of industrial training students shall learn by experience to undertake responsibility, that industry is likely to obtain a considerable proportion of the trained technological man-power that it requires in a rapidly changing world.

The next article in the series will be 'The Education of Technicians and Craftsmen' by Sir Willis Jackson, F.R.S., Professor and Head of the Department of Electrical Engineering in the Imperial College of Science and Technology.

The title of Dr. J. A. Pope, author of the article on 'Technical Education in the Sixties' in November 16 issue of the *Board of Trade Journal*, is Research Director of Mirrlees National Research Division, not 'Association' as stated.

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Lord Privy Seal's Statement

Recent Negotiations with the European Communities

MR. EDWARD HEATH, Lord Privy Seal, made the following statement in Parliament on November 22 about the recent Ministerial meetings in the negotiations with the three European Communities and also announced that a more detailed account would be published in a White Paper the same afternoon.

'At the ministerial meeting with the European Atomic Energy Community in Brussels on November 14, the Chairman, on behalf of the Six member Governments, and the President of the Commission made replies to my opening statement of July 3. The text of these replies were later published by the Community, and English translations will shortly be placed in the Vote Office.

'Discussions between officials began yesterday with an examination of the Euratom Treaty, chapter by chapter. The next meeting of Ministers will be arranged through the deputies.

'The ministerial meeting with the members of the European Economic Community was held in Brussels on November 15, 16 and 17. Agreement was reached on alternative arrangements for those Commonwealth countries which decline the offer of Association under Part IV of the Treaty of Rome. First, the opportunity to associate with the Community would remain open. Secondly, the enlarged Community would declare its readiness to negotiate commercial agreements with any of these countries wishing to do so. Thirdly, there would be a very gradual application of the Common External Tariff to all the exports of these countries. Fourthly the Common External Tariff on tropical hardwoods, which are of major interest to Ghana and Nigeria, should be reduced from 10 per cent. to nil. Fifthly, it would be the policy of the enlarged Community to work towards commodity stabilization agreements where practicable in the commodities produced by these countries.

'It was agreed that an offer of association should be made for Aden with the addition of a protocol dealing with the export of petroleum products from Aden to the Community. There was a full discussion of the problems affecting Malta and the High Commission Territories. Ministers will consider solutions to these at a future meeting.

'We discussed processed agricultural products from Canada, Australia and New Zealand for the first time. I was able to agree with the Community that its offer of a very gradual application of the Common External Tariff would be an adequate arrangement for some of the smaller items. I maintained our proposals for tariff reductions and duty quotas on others. Ministers will revert to this subject later.

'Ministers also discussed for the first time the possible arrangements for mutton and lamb. It was agreed that the proposals of the Community for the application of the Common External Tariff by stages combined with the possibility of suspension of the duty under Article 25 (3) of the Treaty of Rome should be studied further.

'The Ministers of the Community stated that they were not in a position to discuss the agricultural finance regulation with us. A brief discussion did take place on our request for nil duties on newsprint and aluminum.

'It was arranged that the next ministerial meeting will take place from December 10 to 12, followed by a meeting from December 19 to 21.

'In Luxembourg, on November 19, negotiations were continued with the European Coal and Steel Community. Ministers noted the interim report of their officials, who had not been able to conclude their examination of possible incompatibilities between arrangements in the United Kingdom for the coal and steel industries and the Treaty of Paris. The officials will continue their work on these subjects, together with two additional ones, a study of sea transport from the point of view of the pricing rules of the Treaty, and an examination of the level of the external tariffs on steel.

'The next ministerial meeting will be on January 15'.

Discussion on the Minister's statement is reported in columns 1418 – 1427 of Hansard for November 22.

The title of the White Paper is 'Miscellaneous No. 37 (1962). The United Kingdom and the European Communities. Report by the Lord Privy Seal on the meetings with member states of the European Atomic Energy Community on November 14, 1962, with ministers of member states of the European Economic Community from November 15-17, 1962 and with ministers of member states of the European Coal and Steel Community on November 19, 1962.' It is published by H.M.S.O. as Cmnd. 1882, price 8d., by post 11d.

Mr. Anthony Barber on Joining the Common Market

'THE POLITICAL AND ECONOMIC CASE for Britain joining the Common Market seems to me to be almost self-evident to anyone who considers the facts objectively', said Mr. Anthony Barber, Financial Secretary to the Treasury, at the annual dinner of the Wakefield and District Chamber of Commerce and Shipping, on November 23.

'Whether or not we shall be able to join I do not know. There is a price we are not prepared to pay. If we are to become a member we must reach agreement on the essential safeguards which we have repeatedly stated,' Mr. Barber continued.

'But if we did fail to reach agreement, let us not delude ourselves about the consequences. We and the Six would have missed the greatest opportunity of the century of establishing the political unity of Western Europe, and so of making a historic contribution to world peace. Equally we would both have lost a chance of working together for economic and industrial progress. It is for these reasons that we intend to do all in our power to bring the negotiations to a successful conclusion.'

Lord Derwent Opens N.P.Y. in Wales

SPEAKING at the inaugural meeting of National Productivity Year in Wales at Cardiff on November 22, Lord Derwent, Minister of State, Board of Trade, said: 'We can take a couple of examples from a context in which few of us ever think about productivity – Red Indians. We probably always think of Red Indians as galloping about on horseback, surrounding wagon trains and so on. But in fact, the Indians had never seen a horse until they came into contact with the Spanish in the 16th century. This technological improvement helped them to use their manpower far more efficiently – that is productivity. On the other hand, various Red Indian tribes came later on to rely very heavily on the buffalo – for food, clothing, tents and so on. When almost all the buffalo were killed off by white settlers, the Indians found the whole basis of their economy had disappeared. They had failed in one of the major aspects of productivity – the need to look ahead, and to foresee the need for diversification and for new skills.

'In the history of British economic growth' added Lord Derwent, 'the example of the Indian and the horse is a familiar one. The enormous increase in our productivity in the 19th century was based on technological improvements – the introduction of new machinery which allowed us to make far better use of our greatest resource – manpower. Mechanized British industry gave us a dominating commercial position in the world. We produced and sold goods on an unprecedented scale, across the whole industrial field from textiles to railway engines. But times change. Today we can no longer expect to dominate the world in the production of these traditional goods. Many of the basic techniques of industrial production were pioneered and first exploited by us; but today these techniques are familiar all over the world. Once we were the main, if not the only, supplier of all kinds of goods, and our customers had to buy from us or not at all; but today the people who want textiles or railway engines have a wide choice of other suppliers – and in many cases they can supply their own.'

U.K. Delegation to O.E.C.D. Ministerial Meeting

THE United Kingdom Delegation to the meeting of the Ministerial Council of the Organization for Economic Co-operation and Development in Paris on November 27-28, was led by Mr. Reginald Maudling, Chancellor of the Exchequer. He was accompanied by Mr. Frederick Erroll, President of the Board of Trade, and Mr. Edward du Cann, Economic Secretary to the Treasury.

Note: The meeting of the O.E.C.D. Council was the second to be held at Ministerial level since the O.E.C.D. was constituted in September 1961, as the successor organization to the Organization for European Economic Co-operation, with the United States and Canada as full members. The first Ministerial Council was held in Paris on November 16 and 17, 1961, with Mr. Donald M. Fleming of Canada as Chairman. Mr Fleming was again in the chair at this year's meeting.

During the past twelve months, the O.E.C.D. Council has met regularly at official level, when the United Kingdom has been represented by Sir Robert Hankey, the head of the U.K. Permanent Delegation.

Visit of Chinese Vice-Minister of Foreign Trade

MR. LU HSU-CHANG, the Chinese Vice-Minister of Foreign Trade, was invited by Mr. Frederick Erroll, President of the Board of Trade, last April to come to the United Kingdom for an official goodwill visit. The invitation was accepted in July and the Vice-Minister was due to arrive in London on November 29 for a stay of three weeks. A programme had been arranged. However, in view of the possibility that the success of this visit might be prejudiced in the present disturbed situation, the President has suggested to the Chinese Vice-Minister that it be postponed for the time being.

Twentieth Session of the GATT

THE FOLLOWING statement was issued at the conclusion of the Twentieth Session which met in Geneva from October 23 to November 16, 1962:

'The Contracting Parties took a number of decisions which implement the objectives of the GATT to abolish or minimize barriers and obstacles to international trade. Work was carried forward on the Programme for Trade Expansion, and an important decision was taken to convene a ministerial meeting in the early part of 1963 to consider a programme for the effective liberalization and expansion of trade in both primary and secondary products. Full weight would be attached to the importance and urgency of negotiating solutions to the problems of trade in primary products and to the additional trade problems of the less-developed countries. It was decided to hold the twenty-first session of the Contracting Parties from October 22 to November 15 1963.'

Michelin to Build £14 Million Factory in Northern Ireland

THE Northern Ireland Development Council announce that the Michelin Tyre Co. Ltd., British subsidiary of the French international tyre manufacturing concern, is to build a large factory costing £14,000,000 at Hydepark, Co. Antrim, five miles from Belfast, to produce car tyres and steel tyre cord.

Construction of the 684,000 sq. ft. factory will begin early next year, and production is expected to start in 1965. In the first year of production the labour force will be around 700, and should eventually rise to just under 2,000, 90 per cent. men.

Ford of Britain Give their Millionth Tractor to Freedom from Hunger Campaign

THE MILLIONTH Dagenham-produced Fordson tractor was presented by Sir Patrick Hennessy, Chairman of Ford Motor Company Ltd, to Earl De La Warr, Chairman of the Freedom from Hunger Campaign, United Kingdom Committee on November 15. The millionth tractor is a gift from Ford of Britain to the 'Jamaica Project', a plan sponsored and financed by the National Federation of Young Farmers' Clubs as their contribution to the Freedom From Hunger Campaign.

Since February 1933 when Dagenham tractor production began, 1,000,000 Fordson tractors have left the production line; of these no less than 568,000 have been exported to more than 100 countries of the world. The Company's average annual production of tractors at Dagenham now exceeds 70,000 of which over 70 per cent. are exported.

President Sees Liverpool Deputation

MR. FREDERICK ERROLL, President of the Board of Trade, met a deputation of Liverpool Conservative Members of Parliament on November 21 in the House of Commons to discuss unemployment on Merseyside.

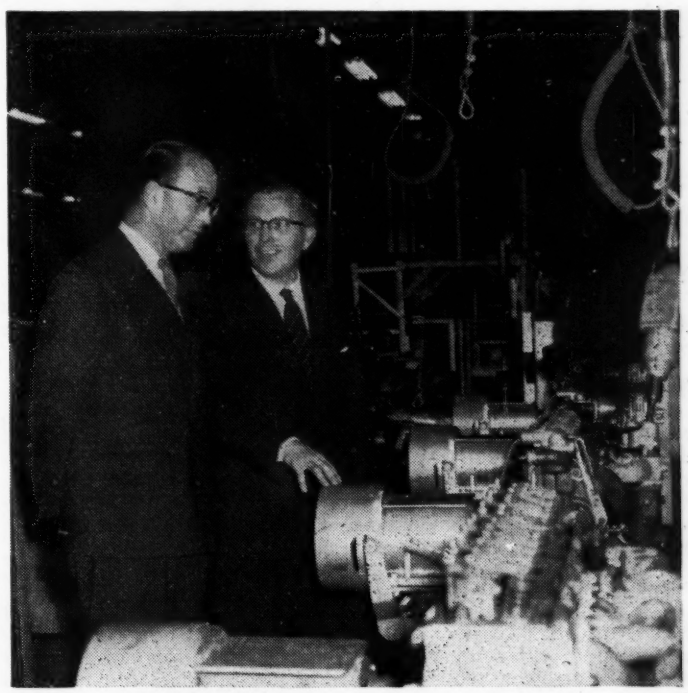
There was an exchange of views and the President took note of the representations made by the deputation.

Vauxhall Extension at Ellesmere Port

WORK IS to start within the next few months on a £4 million 250,000-square-foot extension to Vauxhall Motor's new Ellesmere Port factory. This was announced on November 22 by Mr. William Swallow, chairman and managing director of the company, at a ceremony to mark the laying of the corner-stone of the office block at the plant by Dr. Charles Hill, M.P. for Luton.

Mr. Swallow said that the buildings now under construction at Ellesmere Port, totalling 1,235,000 square feet, would be in full operation in the second half of 1963. Production of components on a very limited scale had already begun, and would increase steadily as the construction and equipment of the plant were completed. But the company's future programme would call for additional manufacturing space. The new extension would provide the solution, at least for the time being.

Lord Derwent at Motor Factory



Lord Derwent (left), Minister of State, Board of Trade, recently visited the Luton, Bedfordshire, factory of Vauxhall Motors Ltd. He is seen here with Mr. K. J. Olney, assistant production manager, mechanical components and plating, inspecting a new type of pedestal assembly conveyor for building six-cylinder engines.

B.M.C's. 3-Millionth Export Vehicle

THE THREE-MILLIONTH British Motor Corporation's post-war export vehicle – a Vanden Plas 3-litre Princess Saloon – was handed over by Mr. G. W. Harriman, chairman and managing director of B.M.C., to Mr. Frederick Erroll, President of the Board of Trade, at a ceremony in London on November 26. The car has been donated to the League of Red Cross Societies to mark B.M.C's appreciation of the work of the Red Cross throughout the world.

At the ceremony Mr. Erroll presented the car to the Countess of Limerick, vice-chairman of the League and also of the British Red Cross Society.

The Corporation export cars, commercial vehicles and tractors to more than 190 different markets.

Applications for Temporary Exemption from Import Duty

THE BOARD OF TRADE are considering applications for the temporary exemption from import duty of the materials listed below on the grounds that these materials are not made in this country or the Commonwealth or the supply available from these sources is not substantial having regard to the existing United Kingdom demand.

Representations are invited from manufacturers in this country or agents of Commonwealth manufacturers, who consider they are, or will be within a reasonable period, in a position to supply a substantial proportion of the United Kingdom demand for these materials, or who are interested in their future production.

Temporary exemptions come into effect on the operative date of the Treasury Order in which the materials are specified and normally continue until the end of the current calendar year, when they are reviewed.

Letters, giving the respective reference shown below, should be addressed to Tariff and Import Policy Division, Board of Trade, Horse Guards Avenue, London, S.W.1, preferably through a Trade Association, and should be received by December 14, 1962.

Tariff heading	Proposed definition for tariff purposes	Applied for as	Exemption required until	Reference
29.02	Trichlorofluoromethane	As in previous column	December 31, 1963	6029
29.27	Diphenylmethyl cyanide	Diphenyl acetonitrile	December 31, 1963	6027
29.35	5-Bromo-6-methyl-3-*iso*-propyluracil	3-isopropyl-5-bromo-6 methyl uracil	December 31, 1963	4822
29.35	1-Ethyl-7-methyl-4-oxo-1 : 8-naphthyridine-3-carboxylic acid.	1 ethyl 7 methyl-1 : 8 naphthyridine-4-one-3 carboxylic acid	December 31, 1963	6030
29.35	3-Hydroxypyridine	3-Hydroxy Pyridine	December 31, 1963	6026

Protection of Depositors Bill

THE Protection of Depositors Bill was published on November 22.

In May 1962 the President informed the House that a Bill to protect depositors would be introduced as soon as parliamentary time permitted.

Need for Legislation

In very general terms the Companies Act in its prospectus provisions controls the offer of new shares or debentures for subscription, and the Prevention of Fraud (Investments) Act controls dealing in securities already issued. There is no similar and general control over investments in the form of deposits, and, for example, an exempt private company, which is not required to file accounts with the Registrar, may advertise for deposits from the public without restriction.

Scope of the Bill

The Explanatory and Financial Memorandum attached to the Bill summarizes the provisions of each clause or group of clauses. So far as depositors with companies are concerned, an important provision is that the company must publish special up-to-date accounts before advertising for deposits and thereafter must continue to keep those accounts up-to-date. The accounts must be delivered to the Registrar where they will be available for public inspection, and they must be supplied to depositors.

The meaning of 'deposit' for the purpose of the Bill is given in Clause 25 (1). A wide variety of companies, societies and other persons advertise for deposits. Those which are already subject to other legislation, or which it is unnecessary to subject to the provisions of this Bill, are exempted from the restrictions on advertising by Clause 2 (2). In addition certain powers of exemption are given to the Board of Trade by Clause 2 (4) and Clause 3 (1) (b).

Wage Policies in the Public Sector

PEP's latest broadsheet (Planning No. 467) examines current problems and policies concerning the determination of pay in the public sector of the economy. Copies: Political and Economic Planning, 16 Queen Anne's Gate, London, S.W.1. Price 4s.

Import Licensing of Cotton Textiles and Yarns

THE BOARD OF TRADE announce in Notice to Importers No. 1019 dated November 30, that the present arrangements for licensing imports of cotton textiles and yarns from countries other than Formosa, Hong Kong, India, Japan, Pakistan and countries and territories in the Eastern Area, are to continue on the same basis after December 31, 1962, when the current licences are due to expire.

Subject to a written undertaking by the applicant to supply monthly returns of imports in a specified form, the Board of Trade will grant open individual licences for cotton yarns, gauze and fabrics falling within tariff headings 55.05, 55.06, 55.07, 55.08 and 55.09, fabrics wholly or mainly of cotton falling within tariff heading 58.04 and textile articles wholly or mainly of cotton falling within tariff heading 62.02 of the Customs Tariff 1959.

For the convenience of applicants, the form of undertaking is given in an annex to Notice No. 1019 and may be detached and returned, duly signed, with the application form (TIP/A (Cotton), TIP/A or ILB/A) which should be sent as soon as possible to the Board of Trade, Tariff and Import Policy Division, Horse Guards Avenue, London, S.W.1. Page 1 of the application form should be completed and page 2 left blank; on page 3, *only* the applicant's name, address and reference (if any) should be entered. In order to avoid delay in the preparation of licences, it is particularly requested that the name, address and reference should also be inserted clearly on the two copies following page 3. No other information at all should be entered on page 3 and copies. Previous licence holders are requested, wherever possible, to use the new form TIP/A (Cotton).

The licences to be issued must be endorsed by the importer or his agent with details of the importations as and when these are made, and must be presented to H.M. Customs and Excise when each consignment is cleared, to enable the quantity to be checked against the Entry and for the endorsement to be stamped by the clearing officer. On expiry, the licences (which will have a validity of twelve months from January 1, 1963, but which will be liable to immediate revocation without notice), including any separate endorsement sheets, will be required to be returned for scrutiny to the Statistics Division of the Board of Trade.

Applicants who may require to clear imported goods at more than one port at the same time, should submit the appropriate number of applications so that separate licences may be issued. One copy of the form of undertaking (CM/2) will be sufficient.

Importers who hold licences valid for the current period ending December 31, 1962, are requested to return these to the Board of Trade, Statistics Division (K.S.), Room C.12, Hillgate House, 35 Old Bailey, London, E.C.4, when sending in their return for the month of December 1962.

Open General Licence for Iron and Steel Scrap

AT the request of the Ministry of Power the Board of Trade announce that arrangements have been made to permit further exports of specified types of iron and steel scrap.

The current Open General Licence expires on December 31.

A new Open General Licence has been issued permitting the export to any destination during the period January 1 to February 28, 1963, of iron and steel scrap not exceeding an f.o.b. value of £25 per ton other than:

(a) material derived from armour plate and
(b) material derived from military equipment described in Group 1 of the First Schedule to the Export Control Order.

This extension of the period of permitted exports is being announced well in advance in order to give exporters as much notice as possible.

Inquiries about this Licence should be made to the Export Licensing Branch, Board of Trade, Gavrelle House, Bunhill Row, London, E.C.1. (Tel. Monarch 4071). Copies of the Open General Licence (price 3d., by post 5½d.) will be obtainable from H.M. Stationery Office, Kingsway, London, W.C.2, and branches.

Note:

The new Open General Licence allows for a further limited period of two months the continued free export of basic grades of iron and steel scrap, including cast iron scrap, while safeguarding home requirements of high value scrap.

The Economy – Selected Indicators

THE FOLLOWING table of selected indicators, published for the first time last week, will now appear each week in the *Board of Trade Journal*. It brings together some of the more important statistical series relating to economic activity in the United Kingdom. These statistics are already published monthly or quarterly in the *Board of Trade Journal* and in other official publications, but it is hoped that the inclusion of this table each week will provide a convenient set of the most recent figures under the respective headings. The latest statistics will not, however, be available in advance of existing programmes for the initial release of the various series.

Where possible and appropriate, the statistics are seasonally adjusted and shown in index form at constant prices. They provide broad measures of recent changes in the gross domestic product and major components of demand in the national income accounts, together with related series of production, orders, prices, unemployment and foreign trade. Too much significance should not be attached to movements shown for a single month; this applies to the unadjusted as well as the seasonally adjusted figures. A commentary on the figures will not accompany this table, and for an interpretation of the most recent trends, or for more detailed figures, the latest official publication should be referred to.

Series expressed as index numbers and seasonally adjusted except where otherwise shown

	GROSS DOMESTIC PRODUCT (expenditure estimates)	INDEX OF INDUSTRIAL PRODUCTION	CONSUMERS' INCOME AND EXPENDITURE				FIXED CAPITAL EXPENDITURE					CHANGES IN STOCKS			
			Personal disposable income	Total consumers' expenditure		Retail sales	Total	Selected components				Total	Selected components		
								Manufacturing industry	Distributive and service industries	Dwellings	Public sector excluding dwellings		Manufacturing industry	Wholesalers	Retailers
	at 1958 prices		at current prices		at 1958 prices	at 1957 prices	at 1958 prices					at 1958 prices			
Base of index	1958	1958	1958	1958	1958	1957	1958	1958	1958	1958	1958	series shown in £ million			
Value in base year, £ m.	19,991	—	16,050	15,232	15,232	7,637	3,493	922	699	591	1,205				
1958	100	100	100	100	100	101	100	100	100	100	100	+ 99	+ 36	+14	+16
1959	103	105	106	105	104	105	107	94	114	113	109	+173	+ 73	+15	+48
1960	108	112	114	109	108	108	118	111	126	129	114	+580	+520	+38	+35
1961	110	114	121	114	109	111	127	133	121	136	121	+263	+222	+15	+ 5
1961															
2nd Quarter	110	115	121	113	109	111	127	135	121	135	124	+ 81	+ 46	+ 7	+14
3rd Quarter	111	115	121	115	109	111	131	143	129	139	125	+ 13	+ 48	—19	—24
4th Quarter	111	113	122	115	109	111	125	130	114	139	114	+ 82	+ 92	— 1	—11
1962															
1st Quarter	108	113	124	116	109	111	125	127	108	133	127	— 42	— 60	—11	+33
2nd Quarter	111	116	126	119	111	110	127	126	119	139	126	+ 25	+ 13	— 6	—11
3rd Quarter		117*				112									
1962															
April	..	114	..	..	..	110	..	..	..	..	..	..	..	..	..
May	..	116	..	..	..	111	..	..	..	..	..	..	..	..	..
June	..	117	..	..	..	110	..	..	..	..	..	..	..	..	..
July	..	116	..	..	..	110	..	..	..	..	..	..	..	..	..
August	..	117	..	..	..	113	..	..	..	..	..	..	..	..	..
September	..	118*	..	..	..	113	..	..	..	..	..	..	..	..	..
October	..		..	..	..		..	..	..	..	..	..	..	..	..

	ORDERS		PRICES AND COSTS				LABOUR						IMPORTS	EXPORTS	BALANCE OF PAYMENTS: current balance
	Engineering industries: orders on hand†	Textiles and clothing industries: orders on hand†	Index of retail prices		Wholesale price index: non-food manufacturing industry		Hourly wage rates: all industries and workers†	Wholly unemployed excluding school-leavers			Unfilled vacancies for adults			Calendar month or monthly average	
			Index†	% change on year earlier	Basic materials and fuel used†	Manufactured products: home sales†		Mid-month or monthly average†	Change from previous period†	Normal seasonal change	Mid-month or monthly average†	Change from previous period†	Normal seasonal change	at current prices	
	at 1958 prices														
Base of index	Dec. 1958	Apr. 1959	Jan. 17, 1956		1954	1954	Jan. 31, 1956	series shown in thousands						series shown in £ million	
Value in base year, £ m.	..	..	—		—	—	—								
1958	100	..	109·0	+3·0	102·8	113·4	114·3	402	+39	..	136	—26	..	312	265	+328
1959	101	135	109·6	+0·6	103·4	114·2	117·4	433	+31	..	157	+21	..	332	278	+111
1960	117	136	110·7	+1·0	104·5	116·0	122·5	337	—96	..	212	+55	..	378	296	—301
1961	120	104*	114·5	+3·4	104·4	119·1	130·3	305	—32	..	213	+ 1	..	366	307	— 77
1961															
2nd Quarter	126	124	113·8	+3·0	105·1	119·2	129·7	282	—55	—57	241	+40	+32	362	305	— 29
3rd Quarter	124	107	115·3	+4·2	104·6	119·4	130·7	262	—20	—34	236	— 5	+ 7	358	309	+ 12
4th Quarter	120	104*	116·6	+4·3	103·4	119·6	132·3	339	+77	+49	175	—61	—32	362	304	— 2
1962															
1st Quarter	121	98*	117·7	+4·7	104·0	120·2	133·7	408	+69	+42	150	—25	— 7	367	306	+ 9
2nd Quarter	120	99*	120·2	+5·6	103·3	120·3	135·6	387	—21	—57	172	+22	+32	369	319	+ 37
3rd Quarter	119*	92*	119·7	+3·8	102·2*	120·8*	137·3	390	+ 3	—34	156	—16	+ 7	384	320	
1962															
April	121	98*	119·7	+5·6	103·8	120·2	135·3	403	— 5	—21	159	+ 9	+13	359	314	..
May	121	100*	120·1	+5·7	103·4	120·3	135·7	389	—14	—22	178	+19	+ 8	379	316	..
June	120	99*	120·9	+5·5	102·6	120·5	135·9	368	—21	—33	179	+ 1	+12	369	328	..
July	118*	95*	120·4	+5·1	102·6	120·6	137·0	371	+ 3	—15	167	—12	+ 4	390	327	..
August	119*	93*	119·4	+3·2	102·0*	120·8*	137·3	392	+21	+ 9	154	—13	— 8	387	309	..
September	119*	92*	119·3	+3·3	101·9*	121·0*	137·5	407	+15	+13	147	— 7	— 8	376	325	..
October			119·1	+2·9	102·1*	121·0*	137·6	456	+49	+26	131	—16	—11	393	336	..
November								498	+42	+18	118	—13	—14			

† NOT seasonally adjusted. * Provisional.

Finance and Growth of United Kingdom Companies, 1958-1960

H.M. Stationery Office have today published 'Company Assets, Income and Finance in 1960' a study by Statistics Division of the Board of Trade of quoted companies engaged in manufacturing and distribution in the United Kingdom. ('Company Assets, Income and Finance in 1960' H.M. Stationery Office 1962, price 10s. The book is a revision and an extension of an earlier list compiled by the Board of Trade in 'Company Assets and Income in 1957' H.M. Stationery Office 1960, price 7s. 6d.)

There was an increase in business concentration during the three years—the largest 100 companies at the end of 1957 already accounted for 51 per cent. of total net assets of the quoted companies, and by the end of 1960 the share of the largest 100 companies had risen to 54 per cent. About one quarter of the 1900 companies which are listed individually in the study are known to have subsidiary companies registered overseas. Over 100 companies disclose their turnover, although they are not required to do so under the Companies Act, 1948. Typical companies to show a high rate of expansion in net assets were large companies earning a high rate of return on their capital but depending on the capital market for a high proportion of the finance used in this expansion. These are some of the points discussed in the following article based on the statistics in the book.

Each year the Board of Trade compiles aggregated profit and loss accounts, balance sheets and statements of sources and uses of capital funds of quoted companies engaged in manufacturing and distribution in the United Kingdom.* A feature of the analysis is the standardization of the contents of each company's accounts into a common form, although the degree to which the accounts of different companies can be standardized is of course limited. For instance, the value of assets like plant and machinery in terms of capacity to earn income for a company is probably quite different from their original cost (or cost revalued to current price levels) as well as from their written down value (cost less depreciation) or their 'break-up' value if they were put up for sale on the open market. Thus comparison between companies on the basis of their accounts must always be treated with caution, but by adopting standard definitions of income, net assets etc. and by eliminating as far as possible the effect of purely 'book' transactions like the revaluation of fixed assets the Board of Trade analysis goes some way towards providing a basis for comparison.

Companies ranked by asset size and income.

'Company Assets, Income and Finance in 1960' covers 2,618 companies engaged mainly in manufacturing and distribution in the United Kingdom. Nearly all of them are public companies whose shares are quoted on a United Kingdom stock exchange, but 34 unquoted companies are included because of their importance; apart from five nationalized iron and steel companies these include companies jointly owned by quoted companies and subsidiaries operating in the United Kingdom of parent companies registered overseas. The book lists individually all companies, numbering 1,909, with assets of £0.5 million or more at the end of the 'year' 1960. The 'year' 1960 is, for each company, its financial year ending between April 6, 1960 and April 5, 1961; other years are similarly defined. These companies are listed in order of the value of their net assets and are also ranked according to their income in the three years 1958 to 1960. The following statistics are shown against each company.

Industry. Each company has been alloted to an industry, corresponding generally to an Order of the Standard Industrial Classification 1958 (S.I.C.) although in a few cases one Order of the S.I.C. has been divided into two or more industries. If a company has diverse activities it has been classified to the industry in which its main activity lies; but for some companies and particularly for industrial holding companies with interests in a number of manufacturing and service industries, the classification is inevitably arbitrary.

Net assets at end – 1960

Net fixed assets at end – 1960

Accumulated depreciation at end – 1960

Current assets at end – 1960

Stocks at end – 1960

Current liabilities at end – 1960

Annual average income†

Net assets at end – 1960 as percentage of net assets at beginning – 1958.

In order to obtain figures which are as comparable as possible for the study of growth of companies, the value of a company's net assets at the beginning of 1958 has been calculated by adjusting the value of its assets at end – 1960 by movements of funds during the years 1958 to 1960. The movements are those recorded in the Board of Trade analysis as arising from changes in the issued share and loan capital of the company, either by way of issues of new capital (apart from capitalization of reserves) or repayments of existing capital; from the retention of profits or the incidence of losses; from changes arising from the loss of disposal of fixed assets; and from changes in the value of minority interests.

Annual average amount retained in reserves†

Annual average depreciation provisions†

New capital 1958 to 1960

Annual average income as percentage of average gross assets 1958 to 1960.

Average gross assets are taken as one-half of the sum of gross assets at the end of 1960 and of gross assets at the beginning of 1958.

There are seven summary tables which cover all of the 2,618 companies whose accounts were analysed by the Board of Trade in 1960, including the 709 companies with assets of less than £0·5 million which are not listed individually in the book. The first two tables summarize, by size groups and by 22 industries, companies' net assets at the end of 1960 and their annual average income in the years 1958 to 1960. The remaining summary tables relate only to 2,515 companies whose accounts were analysed for the three years 1958 to 1960 – that is, they exclude companies which were first granted stock exchange quotations, etc., in 1959 – and they are designed to throw light on the relation between the growth of companies, their size, the extent to which their growth is financed by retained profits, and their gross income on each unit of capital (as measured by their fixed assets, gross of depreciation, plus their net current assets).

Turnover, overseas subsidiaries, acquisitions, etc.

An index lists the companies alphabetically and indicates their net asset ranking. A note is made of the value of a company's turnover if it is recorded in its accounts. The Companies Act, 1948, does not require companies to disclose their turnover, but of the 1,909 companies listed, over 100 provided this information, including a large proportion of the very big companies – 26 of the 50 largest companies provided figures of turnover, sales, etc., in 1960. The index also shows if a company has subsequently been acquired by or merged with another company. Of the 1,909 companies with assets of £0.5 million or more at the end of 1960 about 60 had been the subject of mergers, take-overs, etc., between the end

*The analysis for 1960 was published in an article in *Economic Trends* April 1962; this article also provided a long term review of company finance for the years since 1949.

†The amount shown is the annual average of the years 1958 to 1960, except in the case of companies whose accounts were analysed only for 1959 and 1960, where the average relates to those two years only.

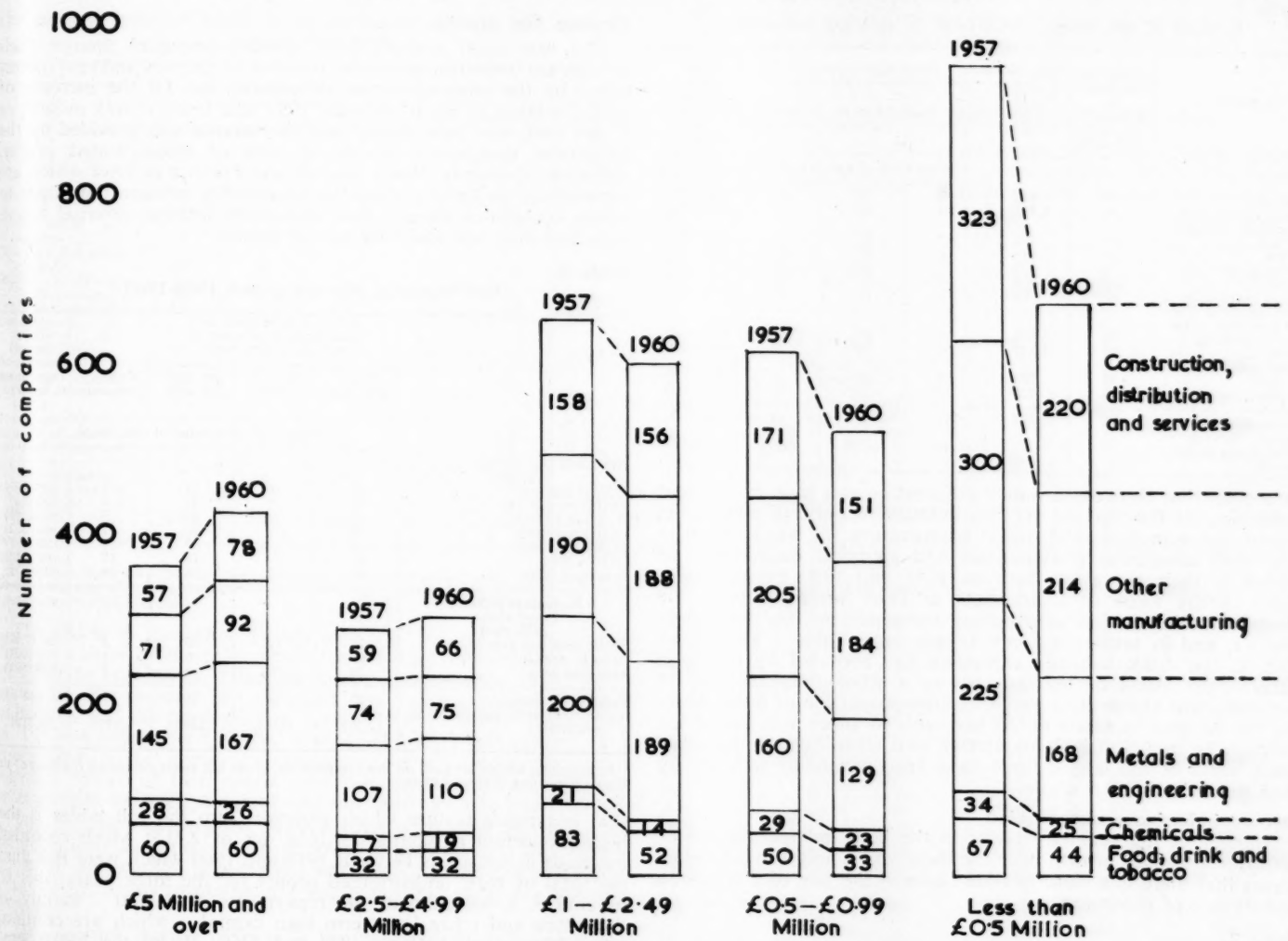
Finance and Growth of U.K. Companies, 1958-1960 (*Continued*)

of their 1960 financial 'year' and December 31, 1961. Among other information included in the index is a note of 560 companies known to have subsidiary companies registered overseas.

Changes in the size distribution of companies, 1957-1960

A comparison with 'Company Assets and Income in 1957' shows a sharp fall in the number of quoted companies between 1957 and 1960, from nearly 2,900 to just over 2,600. At the same time, about 2,200 of the companies recorded increases in net assets over the period. Chart 1 shows how these changes have been accompanied by a change in the distribution by size of companies.

Changes in the Size Distribution of Companies 1957-1960



There has been a marked increase in the number of large companies – in 1957 there were 361 companies with assets of £5 million or more, and by 1960 the number had risen to 423. This growth in the number of large companies reflects the growth of their productive capacity either by the installation of new plant, etc., or by the acquisition of other companies which has been a marked feature of the period, and the book revaluations of existing assets which a number of companies undertook. In the middlesize range of companies – those with assets of between £1 and £5 million – there has been little change in the number of companies; offsetting factors have been at work as companies at the top of this size range in 1957 have now joined the large size group and been replaced by the companies whose assets have passed the £1 million mark since 1957. It is amongst the small companies, and particularly among those with assets of less than £0.5 million, that the fall in numbers occurred between 1957 and 1960; it is from this sector that many of the acquisitions by the large companies have taken place.

During the three years, some 200 companies which were newly granted stock exchange quotations were added to the Board of Trade analysis. Thus allowing for the net fall from nearly 2,900 companies whose accounts were analysed for 1957 to just over 2,600 companies at the end of 1960, it appears that about 450 companies which had stock exchange quotations at the end of 1957 were no longer quoted at the end of 1960. In the main this reflects the mergers and acquisitions which have occurred among the quoted companies.

Company Growth, 1958 to 1960

At the end of 1960, the value of net assets of the quoted companies amounted to £13,500 million, while additions to net assets between 1958 and 1960 amounted to £2,900 million. Thus after eliminating the effect of revaluations of assets, amounts written off goodwill, etc., net assets increased by about 28 per cent. in the three years. One of the summary tables in 'Company Assets, Income and Finance in 1960' gives an industry breakdown of companies by ten ranges of percentage change in net assets. These

Finance and Growth of U.K. Companies, 1958-1960 (*Continued*)

ranges each cover a change of 10 per cent. in net assets between 1958 and 1960; the most typical growth for a company over the period was in the range 10-19 per cent. at annual rate of, say between 3 and 6 per cent. Of the 2,515 companies in existence throughout the three year period, about 600 had growth rates within this range, 800 expanded by less than 10 per cent. – and of these over 300 were smaller in 1960 than they were in 1958 – and 1,100 increased their assets by amounts varying from 20 per cent. to well over 100 per cent. The summary tables in the volume analyse some aspects of company finance which might be expected to be related to company growth.

Table 1 below, based on one of the summary tables, compares the growth of companies in different industries.

Table 1.
Growth of net assets, 1958-1960 in selected industries

Industry	Percentage increase in industry's net assets 1958-1960	Industry's net assets at end-1960 £ million	Percentage increase in net assets 1958-1960			Total (actual number of companies in brackets)
			20 per cent and over	10 to 19 per cent	less than 10 per cent	
			Percentage of number of companies			
Vehicles	39	843	48	18	34	100 (82)
Metal manufacture	36	1,373	55	30	15	100 (112)
Electrical engineering	35	962	67	15	18	100 (107)
Drink	33	894	37	34	29	100 (117)
Metal goods n.e.s.	32	506	54	18	28	100 (152)
Food	27	609	40	20	40	100 (95)
Retail distribution	26	893	51	21	27	100 (150)
Non-electrical engineering and shipbuilding	25	1,276	46	25	29	100 (310)
Chemicals	22	1,847	51	26	22	100 (107)
Wholesale distribution	20	503	34	28	38	100 (225)
Textiles	15	926	23	30	47	100 (263)
Total-all industries	28	13,495	43	24	33	100
(actual number of companies in brackets)			(1,090)	(603)	(822)	(2,515)

It is clear that there were widely different growth rates in different industries. At the top, the vehicles industry (mainly, of course, the motor car manufacturers), metal manufacture (in which the iron and steel companies predominate) and electrical engineering all added to their net assets between 1958 and 1960 by over one-third of the value of their assets in 1958, while assets in the chemical industry and distribution increased by less than one-quarter, and in textiles by only 15 per cent. Table 1 also shows that, in the drink industry, expansion has been led by the large firms – the assets of the industry as a whole increased by 33 per cent., well above the average, but the proportion of firms showing an increase in assets of 20 per cent. or more was below the average. In non-electrical engineering and chemicals on the other hand, some of the largest firms have been expanding less rapidly than the industry as a whole.

Increase in business concentration

Another of the summary tables in the book relates the size of companies to their growth over the three years, and Table 2 below shows that there is a close relation between the size of a company and its rate of expansion.

Table 2.
Size of companies and growth of net assets 1958-1960

Net assets at beginning of 1958	Percentage increase in net assets 1958-1960			Total (actual number of companies in brackets).
	20 per cent and over	10 to 19 per cent	less than 10 per cent	
£,000	Percentage of number of companies			
£25,000 and over	68	18	14	100 (72)
£10,000 to £24,999	65	19	16	100 (116)
£5,000 to £9,999	54	24	22	100 (147)
£2,500 to £4,999	50	25	25	100 (274)
£1,000 to £2,499	43	28	29	100 (582)
£500 to £999	43	24	33	100 (530)
Less than £500	34	22	44	100 (794)
Total - all industries	43	24	33	100
(actual number of companies in brackets).	(1,090)	(603)	(822)	(2,515)

Among the very large companies, two-thirds increased their assets by 20 per cent. or more between 1958 and 1960 and only one in seven recorded an increase of less than 10 per cent. But among the very small companies, only one-third expanded by 20 per cent. or more, and getting on for half of the companies increased their assets by less than 10 per cent.

The fact that large companies expanded more than small ones between 1958 and 1960 indicates that there was an increase in business concentration during these years, and this can be illustrated in a different way by comparing the figures in 'Company Assets and Income in 1957' with those now given for 1960. For example, the 100 largest companies in 1957 already owned 51 per cent. of total net assets of the quoted companies; by 1960, the 100 largest companies had increased their share of total assets to 54 per cent.

Finance for growth

The two main sources from which companies finance their growth are undistributed profits retained in reserves and new money raised by the issue of shares, debentures, etc. Of the increase of £2,926 million in assets between 1958 and 1960, £1,075 million or 37 per cent. was 'new money' and the balance was provided by the companies themselves, mostly by way of undistributed profits. Tables in 'Company Assets, Income and Finance in 1960' which are summarized in Table 3 show the relationship between the extent to which companies finance their expansion without external assistance and their size and their rate of growth.

Table 3.
Self-financing, size and growth 1958-1960

	Retained in reserves as a percentage of increase in net assets 1958-1960				Total (actual number of companies in brackets)
	80 per cent and over	40 to 79 cent	less than 40 cent	Other * companies	
	Percentage of number of companies				
Net assets at end-1960 £,000					
£25,000 and over	32	36	31	1	100 (97)
£10,000 to £24,999	31	30	35	4	100 (140)
£5,000 to £9,999	49	22	24	5	100 (186)
£2,500 to £4,999	50	24	20	7	100 (302)
£1,000 to £2,499	50	22	17	11	100 (599)
£500 to £999	52	23	10	15	100 (520)
Less than £500	47	17	8	28	100 (671)
Percentage increase in net assets 1958-1960					
20 per cent and over	38	31	30	1	100 (1,090)
10 to 19 per cent	68	25	6	1	100 (603)
1 to 9 per cent	76	13	5	7	100 (503)
Total-all industries	48	22	15	15	100
(actual number of companies in brackets)	(1,202)	(556)	(386)	(371)	(2,515)

*Companies which fell back on their reserves or whose net assets decreased (or showed no increase) between 1958 and 1960.

One interesting feature which emerges from the full tables is the high proportion of companies (658 out of 2,515) which recorded increases in net assets between 1958 and 1960 which were less than the total of their undistributed profits for the three years; this is, of course, a reflection of the repayments of capital – mainly of debenture and other long term loan capital – which are continually taking place; between 1958 and 1960, 316 of the 1,909 companies which are listed individually recorded net repayments of capital.

Table 3 shows that the companies which depend to a large extent on outside sources for their finance for expansion tend to be the large companies and the companies with rates of growth above that of the 'typical' company. As a rough guide, companies which provide their own finance for four-fifths or more of this growth can be described as 'self-financed' and companies which finance less than two-fifths of their expansion themselves can be described as 'externally financed'. On these criteria, one in every three of the large companies (with assets over £10 million) but only one in every ten of the small companies (assets less than £1 million) were externally financed. On the other hand, one in two of the small companies, against one in three of the large ones, were self-financed. The relation between growth and dependence on outside finance is

Finance and Growth of U.K. Companies, 1958-1960 (*Continued*)

even more marked; three-quarters of the companies with a growth of less than 10 per cent. were self financed, twice as high as the proportion in the group with a growth of 20 per cent. or more. Table 3 also shows that a far higher proportion of small companies than of large ones fell back on their reserves and showed net decreases in assets between 1958 and 1960.

The earning power of assets

The final table in 'Company Assets, Income and Finance in 1960', which is summarized in Tabe 4 below, shows the relation between the growth of companies and the return earned on their gross assets over the years 1958 to 1960; statistics are also given for 5 broad industry groups.

Table 4.

The earning power of assets by broad industry groups and company growth 1958-1960

	Annual average income as percentage of average total gross assets 1958-1960					Total (actual number of companies in brackets)
	50 and over	40 to 49	30 to 39	20 to 29	0 to 19	
	Percentage of number of companies					
Food, drink and tobacco	12	14	28	29	16	100 (218)
Chemical and allied products	25	13	27	21	14	100 (106)
Metal manufacture and engineering	20	18	24	22	16	100 (747)
Other manufactures	12	11	22	27	29	100 (731)
Construction, distributive and service trades	17	14	22	26	20	100 (658)
Percentage increase in net assets 1958-1960						
20 per cent and over	29	20	26	19	6	100 (1,089)
10 to 19 per cent	10	15	31	31	13	100 (601)
less than 10 per cent	4	4	13	31	48	100 (770)
Total-all industries	17	14	23	25	21	100
(actual number of companies in brackets)	(407)	(344)	(574)	(623)	(512)	(2,460)

Note:
In addition, there were 55 companies which made net losses over the 3 years. These companies were spread over all 5 broad industry groups; all except 3 of them showed a decrease in net assets between 1958 and 1960.

The article in *Economic Trends* in April 1962 referred to earlier describes some of the difficulties of comparing income/asset ratios of different companies, difficulties arising, for instance, from differences in the average age of plant and machinery, methods of valuation, and the proportion of current to fixed assets. The figures in Table 4 must therefore be interpreted with great caution, but there seem to be significant differences between industries in the earning power of their assets over this period, and a significant relationship between rate of growth and income/asset ratios.

The figures express gross income (that is, before providing for depreciation) as a percentage of gross assets (that is, fixed assets gross of depreciation *plus* current assets *less* current liabilities). The ratio of net assets to net income might possibly present a different picture.

One feature worthy of note is the widespread of income/asset ratios. Nearly one-quarter of the companies had earnings which fell outside the range of less than 10 per cent. or more than 50 per cent. on capital employed. The engineering and chemical industries achieved better earnings from their assets than did industries making consumer goods, including food, drink and tobacco, or those providing services. Even more marked was the relation between growth and the earning power of assets. Of the firms whose assets increased by 20 per cent. or more between 1958 and 1960, almost exactly one-half showed an annual return of 40 per cent. or more on their assets, but the earnings of only 8 per cent. of the firms with a slow rate of growth (under 10 per cent.) reached this level.

The expanding companies, statistically

Statistically, therefore, the typical companies to show a high rate of expansion in net assets over the three years 1958 to 1960 were the large companies, earning a high rate of return on their assets, but depending on the capital market for a large proportion of the finance used in their expansion. But, beyond this, 'Company Assets, Income and Finance in 1960' underlines the wide diversity of structure, behaviour and experience of business undertakings in the United Kingdom.

New Companies Registered in October

DETAILS of new companies registered in Great Britain during October 1962, showing nominal capital, are given below. The figures are exclusive of *unlimited* companies and companies *limited* by *guarantee*.

Nominal Capital	Public Companies	Private Companies	Total
Under £1,000	1	1,875	1,876
£1,000 and under £10,000	2	875	877
£10,000 and under £50,000	1	139	140
£50,000 and under £100,000		6	6
£100,000 and under £1,000,000		10	10
£1,000,000 and above	—	—	—
Total number	4	2,905	2,909
Total amount of Nominal Capital	'000s £21	'000s £6,388	'000s £6,409

Companies Registered in Great Britain in 1961-1962

	1961		1962	
	Number	Nominal Capital £'000s	Number	Nominal Capital £'000s
January	2,933	8,057	2,354	15,038
February	2,731	9,304	2,530	7,667
March	3,820	17,075	3,552	10,032
April	2,620	8,470	2,697	6,924
May	3,020	9,402	3,165	8,572
June	3,084	10,669	2,731	36,710
July	2,682	7,144	2,954	6,989
August	2,466	7,142	2,806	8,625
September	2,411	8,385	2,538	15,806
October	2,456	8,005	2,909	6,409
November	2,584	8,979		
December	2,405	7,770		
Total	33,212	110,402		

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Index of Industrial Production for September

THE PROVISIONAL index of production for September, 1962, prepared by the Central Statistical Office, is 118 (seasonally adjusted). For the third quarter as a whole the index was one per cent. more than for the second quarter, and three and a half per cent. more than for the first.

The average index numbers for the latest three months and the previous three months at the foot of the table give a general guide to the changes which have taken place in the output of the major industry groups in recent months. Several of the figures here and elsewhere in the table have been revised as later information has become available.

Average 1958=100

	Total all industries	Mining and quarrying	Manufacturing industries: Total all manufacturing industries	Food, drink and tobacco: Total	Food	Drink and tobacco	Chemicals and allied industries: Total	Coke ovens, oil refineries, etc.	General chemicals etc.	Engineering and allied industries: Total	Engineering and electrical goods	Shipbuilding and marine engineering	Vehicles	Metal goods n.e.s.
Weights	1,000	72	748	86	55	31	68	9	59	310	167	22	79	42
1959	105·2	97	106·0	104	102	107	111	107	111	105	105	94	109	100
1960	112·5	94	114·6	107	104	112	122	117	123	112	114	85	118	112
1961	113·9	93	114·9	110	107	116	124	122	125	113	121	86	109	105
Unadjusted:														
1961 2nd Quarter	116	94	118	114	108	124	126	122	127	117	123	85	117	109
3rd Quarter	108	83	108	108	104	116	118	121	118	106	115	84	100	95
4th Quarter	116	98	116	113	111	117	125	123	125	116	128	87	105	102
1962 1st Quarter	116	99	116	108	108	107	129	119	131	117	124	88	117	102
2nd Quarter	117	97	118	116	112	124	130	118	132	118	125	89	118	103
3rd Quarter (prov.)	110	86	110			115		121		108	117	85	100	97
1962 July	109	87	109	111	105	122	125	124	125	106	118	86	89	102
August	100	73	98	107	107	108	118	120	118	96	99	85	99	79
September (prov.)	120	98	122			114		118		121	133	86	113	109
Seasonally adjusted:														
1961 2nd Quarter	115	93	116	109	106	115	124	122	125	115	123	86	112	106
3rd Quarter	115	93	116	111	108	116	124	123	124	115	124	85	110	104
4th Quarter	113	93	113	110	108	115	125	122	125	112	122	87	106	100
1962 1st Quarter	113	94	113	112	109	116	125	117	127	113	121	87	111	98
2nd Quarter	116	95	116	112	110	116	128	118	130	116	126	89	113	101
3rd Quarter (prov.)	117	97	117			115		122		116	126	87	110	106
1962 July	116	96	116	111	111	113	132	125	132	116	124	87	110	110
August	117	98	117	115	113	118	131	122	133	116	127	87	109	105
September (prov.)	118	96	118			115		119		117	128	86	112	104
April-June (av.)	116	95	116	112*	110*	116	126*	118	128*	116	126	89	113	101
July-Sept. (av.) (prov.)	117	97	117	113*	112*	115	132*	122	133*	116	126	87	110	106

	Manufacturing industries (continued): Metal manufacture: Total	Ferrous	Non-ferrous	Textiles, leather and clothing: Total	Textiles	Leather, leather goods and fur	Clothing and footwear	Bricks, pottery, glass, etc.: Total	Bricks, cement, etc.	Pottery and glass	Timber, furniture, etc.	Paper, printing and publishing	Other manufacturing industries	Construction	Gas, electricity and water
Weights	68	55	13	92	58	4	30	28	17	11	20	55	22	126	54
1959	104	104	107	107	106	103	111	107	108	106	112	107	108	106	103
1960	122	121	123	113	110	102	120	119	120	116	114	119	120	111	110
1961	114	114	116	111	107	102	122	124	130	115	116	120	116	120	116
Unadjusted:															
1961 2nd Quarter	121	121	121	111	107	105	121	128	136	117	118	122	121	121	105
3rd Quarter	104	103	108	106	100	95	121	121	129	109	115	109	111	122	96
4th Quarter	111	110	117	113	110	104	119	125	129	119	120	121	117	120	131
1962 1st Quarter	111	111	115	112	106	103	125	122	123	120	104	122	115	118	145
2nd Quarter	112	111	116	106	103	98	113	131	134	126	113	126	122	123	113
3rd Quarter (prov.)		103		104	98		120					113			102
1962 July	106	106	106	100	96	84	112	130	133	126	110	111			98
August	87	86	90	90	85		102	111	114	105		102			98
September (prov.)		117		123	113		145					126			110
Seasonally adjusted:															
1961 2nd Quarter	118	118	118	112	109	104	121	125	130	115	118	121	119	120	115
3rd Quarter	113	112	117	114	108	104	127	125	131	116	116	119	117	123	115
4th Quarter	109	108	114	109	103	101	120	123	129	114	113	117	114	120	120
1962 1st Quarter	108	107	111	107	103	97	117	123	125	119	109	116	114	118	126
2nd Quarter	109	108	114	108	105	98	114	128	129	126	113	125	120	122	124
3rd Quarter (prov.)		112		111	106		125					124			122
1962 July	111	111	111	109	105	90	121	129	132	125	118	123			121
August	115	115	117	111	105		124	127	126	129		123			122
September (prov.)		110		114	107		129					125			122
April-June (av.)	109*	108	112*	108	105		114	126*	127*	125*		125			124
July-Sept. (av.) (prov.)	112*	112	114*	111	106		125	128*	130*	126*		124			122

*Latest available three months (June-August) and previous three months (March-May)

Import and Export Prices in October

THE index numbers of import and export prices for October each increased by about one half per cent. compared with September. These increases were sufficient to raise the rounded indices to 96 and 114 respectively (1954 = 100). The terms of trade remained unchanged at 84.

The rise of some one and a half per cent. in the index for the food, beverages and tobacco class of imports, reflected as a rise of one point in the rounded index, was partly due to seasonal factors. The indices for basic materials, fuels and manufactured goods were unchanged from their September levels.

The increase in the overall price index was largely due to an increase of one and a half per cent. – two points in the rounded index – in the other manufactures group of exports. The price index for metals also rose by one half per cent. and the indices for engineering products and textiles were unchanged.

The method of calculating the import and export price index was explained in the *Board of Trade Journal* of May 2, 1958.

(1954 = 100)

	Imports					Exports						
		(Class A)	(Class B)	(Class C)	(Class D)		Manufactured Goods (Class D)					
	Total	Food, Beverages and Tobacco	Basic Materials	Fuels	Manufactures	Total	Total	† Metals	‡ Engineering products	§ Textiles (excluding clothing)	Other	* Terms of Trade
1955	103	101	104	102	109	102	102	104	103	100	102	101
1956	105	101	106	110	110	106	106	112	107	99	104	99
1957	107	101	110	128	104	111	109	115	112	101	106	96
1958	99	97	96	112	101	110	111	118	115	101	105	90
1959	98	98	93	104	104	109	111	115	117	98	106	90
1960	99	97	96	98	107	111	114	118	120	102	106	89
1961	97	94	95	96	107	112	115	118	122	106	106	86
1961 April	98	96	95	97	108	112	115	118	121	107	106	88
May	99	96	97	96	109	112	115	117	120	107	107	88
June	98	95	96	95	108	112	115	116	121	108	106	88
July	97	92	97	96	107	112	115	118	121	105	106	86
August	95	91	96	93	106	112	115	119	122	107	105	85
September	95	91	95	95	106	112	115	117	123	106	106	85
October	96	91	95	96	106	112	115	118	122	106	106	85
November	96	93	93	97	106	112	115	118	122	104	107	85
December	96	93	94	96	106	113	116	118	123	106	107	85
1962 January	96	93	93	96	106	113	116	119	123	106	107	85
February	96	94	93	96	105	113	116	120	123	106	106	85
March	96	94	92	96	105	113	116	120	123	107	107	85
April	96	96	92	96	105	113	116	120	123	107	106	85
May	95	94	91	96	104	113	116	120	123	106	105	84
June	96	96	91	94	104	113	116	120	123	106	105	85
July	95	95	90	95	104	113	116	119	124	105	106	84
August	95	94	90	95	105	113	116	120	124	105	106	84
September	95	96	89	95	105	113	117	119	125	106	106	84
October	96	97	89	95	105	114	117	120	125	106	108	84

*Import price index as percentage of the export price index. †Export List Division D. 12, 13 and 14.
‡Export List Division D.15, 16 and 17, 18, 19 and 22. §Export List Division D.6, 7, 8 and 9.

Registrations of British and Foreign Films

THE FOLLOWING are details of films registered by the Board of Trade under the Films Act, 1960, during the week ended Friday, November 23, 1962.

Title of Film	Registered in the Name of	Maker's Name	Registered No.	Playing Time Minutes	Date of Registration
BRITISH					
Look At Life Series 15: *Farming For Fashion*	Rank Film Distributors Ltd.	Rank Film Distributors Ltd.	Br/E 27895	9	November 19
The L-Shaped Room	British Lion Films Ltd.	Romulus Films Ltd.	Br/E 27897	141	November 20
Pathe Pictorial Series 404-416: *Pathe Pictorial No.* 415	Warner-Pathe Distributors Ltd.	Associated British Pathe Ltd.	Br/E 27898	8	November 21
Pathe News 62-93	" "	" "	Br/E 27509	8	November 23
Pathe News 62-94	" "	" "	Br/E 27510	8	November 23
Movietone News 1745A	Twentieth Century Fox Film Co. Ltd.	British Movietonews Ltd.	Br/E 27560	7	November 23
Movietone News 1746	" "	" "	Br/E 27561	7	November 23
FOREIGN					
Cape Fear	Rank Film Distributors Ltd.	Universal International Films Inc.	F 27892	99	November 19
Five Weeks In A Balloon	Twentieth Century Fox Film Co. Ltd.	Twentieth Century Fox Film Corporation	F 27893	101	November 19
It Happened In Athens	" "	Associated Producers Inc.	F 27894	90	November 19
The World By Night No. 2	Warner-Pathe Distributors Ltd.	Warner Brothers Pictures Inc.	F 27896	111	November 20

The title of the film 'The Hideout' (F 27639) registered on July 17, 1962, has been amended to read: 'Buried Alive.'
The length of the film 'Calling All Cats' (F 23295, previous title 'The Six Five Special') has been amended to 5,211 feet (58 minutes) as from October 25, 1962.
Where the title appears in italics the film forms part of a series. Br/E indicates that the film is a British quota film.

British Overseas Commercial Representatives' Visits During December, 1962 to February, 1963

THE FOLLOWING British Trade Commissioners and Commercial Diplomatic Officers are expected to be in this country during December 1962 to February 1963.

CANADA (Montreal)	†M. B. McMahon	Assistant British Trade Commissioner	January 1963	Has served in the Trade Commissioner's Office in New Delhi (India).
CEYLON (Colombo)	G. W. Marshall, M.B.E., B.E.M.	British Trade Commissioner	From February 1963	Served as Assistant British Trade Commissioner in Kenya (Nairobi) and British Trade Commissioner in Ghana (Accra).
INDIA (Calcutta)	*A. J. Salmon	Assistant British Trade Commissioner	From December	Previously served in Pakistan (Karachi and Lahore).
KENYA (Nairobi)	*†C. E. Dymond	Principal British Trade Commissioner	February 1963	Has previously served as British Trade Commissioner in South Africa (Johannesburg and Cape Town).
NEW ZEALAND (Wellington)	†K. W. Neall	Assistant British Trade Commissioner	February/March 1963	In present post since 1960.
NIGERIA (Enugu)	†*J. H. Walsh	British Trade Commissioner in Eastern Nigeria	From January	Has also served as Assistant British Trade Commissioner in Canada (Winnipeg) and as British Trade Commissioner in Hong Kong and Nigeria (Kaduna).
(Lagos)	†D. G. Stewart-Smith	Senior British Trade Commissioner in Nigeria	From January 1963	Has previously served as British Trade Commissioner in India (Calcutta and Madras) and Canada (Winnipeg).
PAKISTAN (Dacca)	*O. E. Goddard	Assistant British Trade Commissioner	January 1963	Has served in the Trade Commission Office in India (Bombay). In present post since 1960.
(Karachi)	J. W. Smith	Assistant British Trade Commissioner	From January 1963	In present post since 1961.
JAPAN (Tokyo)	*J. C. Edmonds	First Secretary (Commercial)	December	In present post since 1960.
SOUTH AFRICA (Cape Town)	*E. V. H. Cooper	Vice-Consul	January 1963	In present post since 1957.
(Johannesburg)	†*J. B. Whittington	Consul	January/February 1963	Has served as Assistant British Trade Commissioner in the West Indies (Kingston and Nassau).
(Pretoria)	*S. J. Gross	British Trade Commissioner	December	In present post since 1958.
UNITED STATES (New York)	I. T. Steven	Consul (Commercial)	End January/ early February	In present post since 1960.

* Not returning to Post. † First notification in the *Board of Trade Journal*.

British firms and organizations which wish to meet any of these officers to discuss specific export problems or, in the case of Mr. Gross to discuss South African tariff policy and procedure, including dumping duties and import control, are asked to write for an appointment. It would be helpful if the nature of the problem, in particular the commodities involved, could be stated.

Those firms and organizations which would wish to see an officer *only* if an appointment in their own area could be arranged should contact the appropriate Board of Trade Regional Office, or in Northern Ireland, the Ministry of Commerce, Belfast. Those which would either prefer or would be prepared, if necessary, to meet the officer for an interview in London should approach Tours Section, Board of Trade, Horse Guards Avenue, London, S.W.1.

Firms are reminded that the Export Services Branch of the Board of Trade, Hillgate House, 35 Old Bailey, London, E.C.4, are in close touch with all overseas representatives and would be glad to advise British firms on matters relating to their export trade. Regional Officers of the Board of Trade or, in Northern Ireland, the Ministry of Commerce, Belfast, are also available for consultation on export matters.

New and Revised British Standards

SOME recent British Standards published are listed below. Copies are obtainable from the British Standards Institution, British Standards House, 2 Park Street, London, W.1.

B.S.	Particulars	Price
1202	Nails:	
	1202 Part 3: Aluminium nails	6s. 0d.
3380	Wastes for sanitary appliances and overflows for baths:	
	3380 Part 2: Skeleton sink wastes	5s. 0d.
3535	Safety isolating transformers for industrial and domestic purposes	15s. 0d.
3542	Table earthenware for local authorities and hospitals	4s. 0d.
3543	Sisal twines for automatic pick-up balers and similar machines	3s. 0d.
3546	PVC-coated fabrics (cotton and rayon staple) for foul weather clothing	4s. 0d.
3548	Fractional horsepower endless V-belt drives	7s. 6d.
3551	Alloy steel shackles	7s. 6d.
3552	Terms used in coal preparation	10s. 0d.
3554	Independent low pressure governors for appliances burning town gas	5s. 0d.
3555	Ring spanners	5s. 0d.
3557	Method for the quantitative chemical analysis of mixtures of polyester fibres with cotton or viscose rayon	3s. 0d.
3662	Methods for the determination of the colour fastness of leather	15s. 0d.
NEW AIRCRAFT STANDARDS:		
C 2	Coupling dimensions for aircraft connections for water of drinkable quality	4s. 0d.
G 180	In-line connection of aircraft electrical cables	2s. 6d.
SP 93	Rubber grommets for aeronautical purposes	4s. 0d.
REVISED BRITISH STANDARDS:		
18	Methods for tensile testing of metals	6s. 0d.
131	Methods for notched bar tests:	
	131 Part 4: Calibration of pendulum impact testing machines for metals	4s. 6d.
341	Valve fittings for compressed gas cylinders:	
	341 Part 1: Valves with taper stems (excluding valves used for breathing and medical purposes)	12s 6d.

Production of Man-made Fibres in October

PRODUCTION of man-made fibres in October was the highest yet recorded and 9 per cent. more than in October 1961. Within the total, output of continuous filament yarn increased sharply and, compared with a year earlier, was 16 per cent. more; output of staple fibre was 4 per cent. more.

Production

(Million lb. 'delivered weight' basis)

	Continuous Filament Yarn (Singles)	Staple Fibre	Total
1958 (quarterly average)	47·9	57·7	105·5
1959 (quarterly average)	58·9	69·8	128·7
1960 (quarterly average)	67·2	80·8	148·0
1961 (quarterly average)	66·0	76·4	142·4
1961 1st Quarter	67·5	71·6	139·1
2nd Quarter	65·8	72·0	137·8
3rd Quarter	60·7	77·4	138·1
4th Quarter	67·9	84·7	152·6
1962 1st Quarter	67·8	78·9	146·7
2nd Quarter	73·4	83·6	157·1
3rd Quarter	71·0	79·1	150·1
1961 September	20·0	25·4	45·4
October	23·0	29·8	52·8
1962 September	24·7	29·2	53·9
October	26·7	30·9	57·6

Export Council for Europe Conferences on 'The Challenge of Europe'

By Ion Earle, Chief Executive, Export Council for Europe.

IN THE PAST five months the Export Council for Europe has planned and carried out a series of one-day conferences for industry and commerce in thirteen manufacturing centres in the United Kingdom. Each has been designed to provide for constructive discussion of present and future export possibilities and problems in Europe in relation to the products and interests of the area. The centres chosen were: Leicester, Nottingham and Sheffield (July 3, 4 and 5); Leeds, Manchester and Liverpool (July 17, 18 and 19); Cardiff, Bristol and Slough (October 2, 3 and 4); Durham, Edinburgh, Glasgow and Belfast (November 6, 7, 8 and 9). Speakers and visitors from Europe travelled direct from one conference to the next within these four series.

Each conference was organized in close co-operation with the local representatives of the ECE's sponsoring bodies – the Association of British Chambers of Commerce, the Federation of British Industries, the National Association of British Manufacturers and the Trades Union Congress.

By this means a total of over 1,500 industrialists, chiefly of board or top-management level, have been able to share knowledge and experience of export markets and methods, and to consider co-operation of approach and methods where appropriate.

The Export Council under the leadership of its Chairman, Sir William McFadzean, firmly believes that British firms can greatly benefit from person-to-person discussion of export conditions and is convinced that the experiment it has undertaken has been fully justified in the result. The conferences were lively and stimulating and in some instances resulted in immediate local action to co-ordinate the resources of business interests for a joint attack on European markets.

At all the conferences arrangements were made for each group of allied industrial interests to be addressed in turn by the same speakers, assisted by the specialist advisers on continental markets invited from Europe. In most of the conferences the topics for discussion were limited to four and the subjects included Market Information and Opportunities; Selling Arrangements in Europe; Co-operative Efforts in Promotion, Selling and all other fields; Export Finance, Credit and Credit Insurance; and Design in Industry.

Some of the speakers were members of the Export Council. Others were leading industrialists with first-hand experience of exporting, or with special knowledge or qualifications. The purpose of the conferences was catalytic rather than didactic. If local interest in the importance of Europe's export market proves to be have been stimulated, and if more firms which did not export before now feel encouraged to do so, then the conferences will have been worthwhile. It is also hoped that new exporters will have learned from them something of the snags ahead and the ways by which they can be avoided, and of the help and co-operation they may expect to obtain from quarters previously unsuspected or imperfectly recognized. Although a fair proportion of the firms represented at this series – perhaps as high as 25 per cent. – had never exported at all, the value to experienced exporters who were able to exchange useful information during the discussions should not be underestimated.

It can be said that all conferences laid emphasis upon the value of co-operation, whether in the sharing of market information within non-competing groups or in the co-ordination of methods for joint promotion and selling, including the choice of agents. A point often brought out was the extent to which existing sources of information on markets can be tapped at the present time, without cost or much extra effort. Many speakers and delegates pointed out that a great deal of what is essential in studying a foreign market is already available, either from Government sources, including the Board of Trade and Government's overseas representatives, or from organized industry or banks, or even from the nearest public library.

Several of the meetings expressed interest in the fact that the credit facilities now available to exporters through modifications in the scope of the Export Credit Guarantee Department are not as widely known as they might be, and that the simplest answer to any would-be exporter in search of facts on this is to ask his bank manager. Recognition was widely given to the new flexibility of the ECGD and to the fact that the services provided are at least as good as those available to any of our overseas competitors.

In discussions on design, suggestions were put forward that qualified designers in industry should be given senior status (with salesmen and market research executives), that were appropriate they should have the chance of promotion to board level and that, specifically, designers should more often accompany directors on business visits abroad in order to study local trends and meet the customers or prospective customers. The introduction of more women designers was proposed to supplement the present British shortage of trained advisers in this increasingly important field.

At all the meetings, stress was laid on the importance of frequent visits at top level both to agents and customers, it being urged that unless an overseas sales drive stems from board level itself, both short- and long-term decisions are delayed and valuable orders risk being lost. Much thought was given to the need for all British representatives travelling abroad to bear in mind that they speak and act not only for themselves or for their products, but for Britain.

Retail Sales in Northern Ireland in September

STATISTICS prepared by the Ministry of Commerce show that the total value of retail sales in Northern Ireland in September was 1 per cent. higher than a year earlier, compared with increases of 2 per cent. in recent months. In the third quarter as a whole, sales were 2 per cent. higher than a year earlier, compared with a 4 per cent. increase in the second quarter.

Sales by food shops in September showed an increase of 4 per cent., while there was no change in sales by clothing and footwear shops. Sales by household goods shops showed a decrease on a year earlier of 2 per cent.

A brief description of these statistics was given in the *Board of Trade Journal* on March 18, 1960 (page 608). Further details may be had on application to Northern Ireland Index of Retail Sales, Room 55, Ministry of Commerce, Chichester Street, Belfast. (Tel. Belfast 28271, Ext. 112).

Index Numbers of Value of Sales per Week (1959 = 100) and Percentage Changes Compared with a Year Earlier.

	All kinds of business		Food shops		Clothing and footwear shops		Household goods shops		Other shops	
		%		%		%		%		%
1960 Year	102	+ 2	101	+ 1	104	+ 4	94	— 6	105	+ 5
1961 Year	107	+ 5	108	+ 7	108	+ 4	94	Nil	109	+ 4
1961 First quarter	99	+ 7	105	+ 8	96	+11	88	— 5	93	+ 6
Second quarter	105	+ 3	107	+ 9	112	— 3	93	— 2	102	+ 2
Third quarter	104	+ 6	105	+ 6	97	+ 5	97	+10	109	+ 6
Fourth quarter	120	+ 3	113	+ 5	127	+ 4	99	— 3	131	+ 2
1962 First quarter	99	Nil	109	+ 4	87	— 9	91	+ 3	93	Nil
Second quarter	109	+ 4	113	+ 6	110	— 1	98	+ 6	105	+ 3
Third quarter	106	+ 2	110	+ 5	98	+ 1	94	— 2	108	— 1
1962 January	97	+ 2	106	+ 5	86	— 5	88	Nil	92	+ 4
February	101	+ 5	112	+ 6	89	— 2	94	+13	94	+ 6
March	100	— 6	110	+ 1	87	—19	90	— 2	94	— 8
April	107	+ 8	111	+ 6	111	+12	91	— 1	104	+ 9
May	113	+ 2	114	+ 6	122	— 3	102	— 2	105	+ 1
June	107	+ 2	113	+ 5	97	—12	106	+21	106	+ 1
July	103	+ 2	107	+ 6	94	Nil	92	— 3	106	— 2
August	108	+ 2	113	+ 5	100	+ 1	101	— 2	110	— 1
September	105	+ 1	110	+ 4	100	Nil	90	— 2	107	— 1

Liability of Cinema Exhibitors to the Film Production Levy

THE BOARD OF TRADE have made Regulations raising from £250 to £300 the amount which a cinema exhibitor can take in any week before he becomes liable to the Film Production Levy. This change has been approved by the Cinematograph Films Council.

Copies of the Order, the Cinematograph Films (Collection of Levy) (Amendment No. 2) Regulations (S.I. 1962, No. 2544, price 3d., by post 5½d.) can be obtained from H.M. Stationery Office, Kingsway, London, W.C.2, and branches.

Cinema Takings in October

DURING October the weekly average of admissions to cinemas in Great Britain was 7.4 million and the weekly average of gross box office takings was £1.11 million, not £111 million as stated on page 1063 in last week's *Board of Trade Journal*.

Recent Export Orders

United Kingdom firms are invited to send in brief details of new export orders or contracts for publication on this page.

Part of a consignment of furniture (seen at Prestwick Airport) ordered from Morris of Glasgow to furnish the new 'Vins de Ecossé' being opened by Scottish & Newcastle Breweries Ltd., in Nice.

Control Gear for Aden

Two members of the Metal Industries Group have won orders from the Aden Government for an extension to the Isthmus pumping station control board. Brookhurst Igranic Ltd., Bedford, are to supply 'the control' gear, and two 250 h.p. motors are to be supplied by Lancashire Dynamo & Crypto Ltd., Manchester.

Stone Crushing Plant for Czechoslovakia

Two pebble mill plants (for grinding felspar magnetite for use in the ceramics industry) have been ordered by Strojimport of Czechoslovakia from the Fraser and Chalmers Engineering Works of the General Electric Co. Ltd., London.

Incubators for United Arab Republic

Four 'Mammoth' incubators, worth £1,030 have been ordered from Secura Ltd., Carlisle, by the Supreme Organization for Drugs in Cairo.

Buses for South Africa and Hong Kong

A fleet of single-deck buses with semi-automatic gearboxes has been ordered from the Leyland Group by Cape Electric Tramways Ltd., South Africa, to augment the fleet of double-deck buses which they recently ordered. The Kowloon Motor Bus Company, Hong Kong, have ordered £175,000 worth of buses for country use from Albion Motors Ltd.

Steelwork for Power Stations

Redpath Brown & Co Ltd., Glasgow, are supplying 1,000 tons of structural steelwoork to the Trinidad and Tobago Electricity Commission and a further 200 tons for an extension to the Norton Bridge Power Station, Ceylon.

Head Wrightson Italian Contract

Montecatini of Milan have awarded a contract worth £1 million to Head Wrightson & Co. Ltd., Thornaby-on-Tees, for a plant which will convert pyrites ashes into 1,000 tons a day of finished product for use in blast furnaces for the production of pig iron.

Mining Equipment for South Africa

AEI Ltd., have secured a contract from the Buffelsfontein Gold Mining Company Ltd., South Africa, for electrical equipment.

Stone Crushing Plant for Sarawak

Frederick Parker Ltd., Leicester, have received another order from Kuching for electrically driven plant which is to be used for breaking up limestone for the building industry.

Diesel Engines for France

Leyland Motors Ltd., are supplying diesel engines to Compagnie Francais John Deere, for use in agricultural tractors.

New Nicaraguan Flour Mill

A £400,000 contract has been awarded jointly to Taylor Woodrow (Overseas) Ltd., and Henry Simon Ltd., who are to design, construct and equip a flour mill and grain storage silos for Gem-Ina S.A. at Chinandega, Nicaragua.

Electrical Cabling for Mauritius

Overhead transmission cabling, worth £87,000, is to be supplied and installed by BICC Ltd., for the Central Electricity Board of Mauritius.

Cleansing Equipment for Egyptian Sewers

General Descaling Co. Ltd., Worksop, Notts, are to supply sewer cleansing equipment for use in Cairo and Alexandria.

International Orders for Austin Commercial Vehicles

Orders worth a total of £660,500 have been received by the Austin Motor Co. Ltd., Birmingham, for the supply of commercial vehicles and engines to Egypt, Uruguay, South Africa, Ceylon, Borneo, Greece, Turkey and Sudan.

Cranes for Dublin

John Boyd & Co. (Engineers) Ltd., Dumfriesshire, have received an order for 12 cranes worth about £250,000, from the Dublin Port and Docks Board.

CLEANING WASTE LTD.

Washed Wipers · Cleaning Rags · Cotton Waste, etc.

FALKLAND ROAD, HARRINGAY, LONDON, N.8. *MOUntview 3411 (6 lines)*

Contractors to H.M. Government

Recent Export Orders (Continued)

Egypt Buys British Scientific Glassware

Quickfit & Quartz Ltd., have recently supplied Egypt with interchangeable laboratory glassware valued at £8,000.

Crane Controls for South Africa

Controls for 22 harbour cranes, to be installed by South African Railways at Durban, East London, Cape Town and Walvis Bay have been ordered from Brookhirst Igranic Ltd., Bedford. Design and manufacture will be carried out by the firm's South African subsidiary in Johannesburg from components sent out from Bedford.

Russia Buys British Air Navigation Equipment

Standard Telephones & Cables Ltd., London, have secured an order worth £250,000 to supply the Russian airline, Aeroflot, with airborne navigation equipment. Included is a 3 year service and maintenance contract to be carried out at London Airport. This order brings the firm's total business in airborne equipment with Eastern Europe to well over £1 million.

Africa Buys BAC One-Elevens

British Aircraft Corporation have secured an order from Central African Airways for two One-Eleven airliners and ancillary equipment, including additional engines and spares worth £3 million.

Equipment for Television Station in Vera Cruz

A $70,000 contract to supply studio equipment for a new small commercial Television Station in Vera Cruz, Mexico, has been secured by E.M.I. Electronics Ltd.

More Commer Vehicles for Turkey

An order worth £350,000 has been placed with the Rootes Group for 650 Commer 15-cwt. vans, light buses and Commer Cobs, together with spare parts by the Group's distributors in Istanbul, Otomak, Turk Ticaret Ltd.

Electric Cabling for Pakistan

British Insulated Callender's Construction Ltd., London, have received an order worth more than £100,000 for 11kV cabling from the Water and Power Development Authority, Dacca, East Pakistan.

British Buses for Western Australia

A contract for 30 Worldmaster buses, built by Leyland Motors Ltd., has been received from the Metropolitan Passenger Transport Trust, Perth, Australia. A 'market tailored' feature will be the replacement of all the aluminium components by cast iron units because of the unusually heavy corrosive action on aluminium by the water in Perth.

Scientific Glassware for Russia

Russia's official buying organization, Mashpriborintorg, recently placed an order with Quickfit and Quartz Ltd., Staffs., for interchangeable laboratory ware.

Tellurium Furnace for Peru

Foundry & Metallurgical Equipment Co. Ltd., of Surrey, are to supply an oil fired, nose tilting furnace, for the melting of tellurium, to Peru, which is to be installed on a site 12,000 feet above sea level.

Roumania Buys British Woodworking Equipment

Stenners of Tiverton Ltd., have received an order through the Commercial Secretary at the Roumanian Legation in London for a band resaw machine and ancillary equipment. The placing of this contract follows a study of the timber industry in Roumania by the firm, and also an exchange of visits by key personnel.

Parliamentary Answers (Continued from page 1115)

Hong Kong Certificates of Origin

In reply to a question about Hong Kong certificates of origin, the Minister of State said that certificates of origin normally constituted acceptable evidence that goods had been manufactured in Hong Kong and that the costs of manufacture contained the prescribed proportion of Commonwealth expenditure. The certificates had to be endorsed by public accountants approved by the Hong Kong Government and counter-signed by the Department of Commerce and Industry in Hong Kong. In addition, the Commissioners of Customs and Excise might require further supporting evidence if they had doubts in any particular case. The President was satisfied that these arrangements provided an effective safeguard against the possibility that goods manufactured outside Hong Kong might be passed off as goods of Hong Kong origin.

Knitwear Imports from Hong Kong

The President was asked if he was aware of the continuing and increasing damage that was being done to Scottish knitwear factories by imports from Hong Kong; and what steps he had taken and planned to take to protect this Scottish industry. In reply the Minister of State said the President was aware that imports from Hong Kong were increasing but production of knitted goods in Scotland as a whole had been well maintained.

Articles of Traditional Japanese Design

Asked whether he would state as fully as possible what were the articles of traditional Japanese design which it was proposed should, under the terms of the Anglo-Japanese Trade Agreement, be exempted from quota restrictions, the President said it had been agreed between the two Governments that the British and Japanese industries should consult together in order to determine what articles could properly be regarded as of traditional Japanese design.

H.P. and Consumer Protection

A member asked if the President accepted the recommendations of the Molony Committee on Consumer Protection in respect of hire-purchase transactions. The Parliamentary Secretary said in reply that the President was in general agreement with the intention behind these recommendations, but until he had completed the consultations which he was undertaking with interested parties he could not make any statement about the Government's conclusions on individual recommendations.

Entry of British Goods to Commonwealth

Replying to a question about recent easements on the restrictions of entry of British manufactured goods into Commonwealth countries, the Minister of State said that in October, Australia removed most of her remaining import licensing restrictions; and New Zealand announced new or increased quotas for certain goods for the year beginning July 1, 1962. In November, Canada removed or reduced the temporary tariff surcharged from certain of the items on which it had been imposed in June. Details were published in the *Board of Trade Journal* on October 26 and November 9 and 23.

UK Steel Imports from South Africa

In reply to a questioner the Minister of State said that South Africa still received the same import preference as Commonwealth countries in respect of steel products imported into the United Kingdom.

Legislation to Amend 1948 Companies Act

The answer given on page 1069 of the *Board of Trade Journal* of November 23 to a reply given on the above subject on November 20, should have read as follows:

'The President was asked if he would introduce legislation during this session to amend the Companies Act 1948 so as to control solicitation of money from the public. In reply the Parliamentary Secretary said legislation would be introduced as soon as the Parliamentary programme permitted'.

INSURE WITH
The LONDON & LANCASHIRE Insurance Co. Ltd
CHIEF ADMINISTRATION
7 CHANCERY LANE, LONDON, W.C.2

Government Surplus Sales

Air Ministry

1962	Stores	Location	Auctioneers
Dec. 3 .	Huts and Buildings Nissen and Laing huts 1 x 3,500 gal. underground fuel tank. 2 x 30,000 gal. steel water towers.	Royal Air Force Station, Hethel.. . .	Thos. Wm. Gaze & Son, Crown Street, Diss, Norfolk. (Tel. No. Diss 2291/2). Catalogues free.
Dec. 5 .	Huts and buildings (Seco, Nissen, timber etc.). 1 Beck Type C2 petrol pump. 500 gal. underground tank.	Royal Air Force Station, Amport, Nr. Andover, Hants.	Allen & May, 18 Bridge Street, Andover. (Tel. No. Andover 3417). Catalogues free.
Dec. 6 .	Miscellaneous stores and equipment . .	No. 25 Maintenance Unit, Royal Air Force, Hartlebury, Worcs.	Nock & Joseland, Bank Building, Kidderminster, Worcs. (Tel. Kidderminster 2053).
Dec. 11 .	Huts and buildings. Temporary brick and Nissen huts. T2. hangar. Cable.	Royal Air Force Station, Rattlesden, Suffolk.	Osmond E. Griffiths, Rothsay House, Newmarket. (Tel. No. Newmarket 2055). Catalogues free.
1963			
Jan. 10 .	Miscellaneous stores and equipment . .	No. 35 Maintenance Unit, Royal Air Force, Heywood, Lancs.	Brady & Son, 17 Warren Street, Stockport, Cheshire. (Tel. Stockport 2252).
Jan. 23 .	Miscellaneous stores and equipment . .	No. 16 Maintenance Unit, Royal Air Force, Stafford.	South & Stubbs, 28 Eastgate Street, Stafford. (Tel. Stafford 2331).
Feb. 13 .	Miscellaneous stores and equipment . .	No. 7 Maintenance Unit, Royal Air Force, Quedgeley.	Bruton Knowles & Co. Albion Chambers, King Street, Gloucester. (Tel. Gloucester 21267).

Catalogues for the above sales may be obtained within fourteen days of the advertised date of sale, on application to the auctioneers. (Catalogues for all sales held at Maintenance Units cost 1s. 0d. each, *Postal Orders only*).

Tender of Sale

Tenders are invited for the purchase and removal of approximately 104,000 sq. yards of pierced steel planking, situated at Duxford, Cambridgeshire. Apply within 7 days of the date of this notice to Air Ministry (C.19a), Turnstile House, High Holborn, London, W.C.1. for tender form.

War Office

1962	Stores	Location	Auctioneers
Dec. 4, 5 & 6	Vehicles, earth moving, roadmaking and lifting equipment.	W.D. Storage Depot, Ruddington, Notts. .	Walker, Walton & Hanson (Dept. L), Byard Lane, Bridlesmith Gate, Nottingham. (Tel. 54272).
Dec. 11 .	Machine tools and miscellaneous stores including:	W.D. Storage Depot, South West Stores, Euxton Lane, Chorley Lancs. Sale at Cheetham Town Hall, Manchester, 8.	J. H. Norris & Son (Dept. L), 9 Albert Square, Manchester, 2.

Rockford, Denham, Swift & Nile centre lathes; Cincinnati, Adcock & Shipley and Richmond horizontal millers; Brown & Sharpe and Edgwick universal millers; Snow horizontal surface grinder; B.S.A. No. 7 centreless grinders; C.G.&T. thread grinder; Cleereman vertical drill; Taylor & Challen and Greenwood & Batley vertical & horizontal presses; Pratt & Whitney Slotter; Denison tensile tester; pedestal & bench grinders; Pultra watch lathe; M.T. and aircraft spares; electronic equipment; Ferranti 2,400/400 cycle generator units; Hall mobile refrigeration unit; Roneo postal franking machine; Emidicta dictating machines; Frigidaire & Lightfoot refrigerators; Hobart mixing machines & dish washer; 3,000 pocket watches; electric lamps & fittings; light shades; 4,000 folding forms; 900 folding tables; air compressors; wire barbing machinery; large quantity straight & curved corrugated steel sheets; boilers; storage tanks; cisterns; slow combustion stoves; flue pipes; wired glass sheets; Dormer window frames; glazed sinks & washbasins; water taps; thermostatic valves; stay rods & wire; switches; cable; door locks; hinges; nuts; bolts; washers; drive screws; 300,000 cigarettes.

Dec. 18 .	Machine tools and miscellaneous stores .	W.D. Storage Depot, Rotherwas, Hereford. .	Russell, Baldwin & Bright (Dept. L), 20 King Street, Hereford, (Tel. 4366).
1963			
Jan. 3-4 .	Machine tools, electrical equipment and miscellaneous stores.	Technical Stores Sub-Depot, Wem, Salop. .	Hall, Wateridge & Owen Ltd. (Dept. L), High Street, Shewsbury, (Tel. 2081).

Catalogues for each sale shown above may be obtained from the appropriate auctioneer 14 days prior to date of sale, price 1s. 0d. (*Postal Orders only*).

MACHINE TOOLS — Sale by Tender

Single- & multi-spindle automatics; vertical borer; horizontal & vertical broaches; drills; plain & surface grinders; centre, capstan, turret & multi-tool lathes; horizontal, vertical & manufacturing millers; planer; presses; keyseating, engraving, tapping and slotting machines.

Location: War Department Storage Depot, Rhydymwyn, Nr. Mold, Flintshire.

Application for tender forms should be made to War Office, Directorate of Disposals, First Avenue House, High Holborn, London, W.C.1. Tender forms must be returned by December 13, 1962. Permission to view on presentation of tender forms only.

Ministry of Public Building & Works

1962	Description of Goods	Location	Auctioneers
Dec. 4	Office and miscellaneous furniture, domestic refrigerators, electric and other fittings, canteen equipment, crockery, etc.	Ministry of Works, Supplies Division Stores, Shed 10, 51 Kidbrooke Park Road, London, S.E.3.	Hollingsworth, Bank Chambers, 329 High Holborn, London, W.C.1. (Tel.: Holborn 0337.) (Catalogues, price 6d., are obtainable direct from the auctioneers.)

Questions Asked and Answered in Parliament

Below is a selection of questions of interest to industry asked and answered in Parliament

Thursday November 22

Trade with China

Asked what was the policy of H.M. Government concerning United Kingdom trade with China, especially in materials likely to be of use in wartime, and whether he would now close the United Kingdom Embassy in Peking, the Prime Minister replied:

'It remains the policy of Her Majesty's Government to encourage the normal development of trade with China. Exports of arms, ammunition and other goods of strategic significance are subject to the embargo which we apply in concert with our allies. There is no reason why Her Majesty's Government should close the United Kingdom Mission in Peking.'

E.E.C. and Soviet Bloc Countries

The President was asked in view of the long-term trade arrangements already existing between Western Germany, Italy and other Common Market members with the Soviet bloc countries, if he would give an assurance that British exports to the Communist world would be no less favourably treated if the United Kingdom joined the Common Market.

In reply, Mr. Frederick Erroll, the President, said: 'It is one of the objects of the European Economic Community to work out in due course a common commercial policy towards the countries of the Soviet Bloc. If we join it, we shall be parties to that policy, and our exports will enjoy the same opportunities as those of other member countries.'

Cutlery Research Levy Order

Discussion on the approval of the Cutlery and Stainless Flatware Industry (Scientific Research Levy) Order, 1962, is reported in columns 1547-1562 of *Hansard* of November 22.

Economy of Northern Ireland

The debate on the Report of the Joint Working Party on the Economy of Northern Ireland (Cmnd. No. 1835) is reported in Hansard of November 22, columns 1457-1542.

Negotiations with European Communities

The statement by Mr. Edward Heath, Lord Privy Seal, is given on page 1100 of this issue.

Friday November 23

Tea Imports from India

Asked about imports of tea into the United Kingdom, the President said the proportions for the period January-October, 1962, were:

Country of Consignment	Percentage of Total U.K. Imports of Tea
*India	45
*Rhodesia and Nyasaland	5
Kenya	4
Ceylon	33
Other countries	13

*Imports from Assam and from Nyasaland are not separately distinguished in the trade returns. It is estimated that about 80% of the imports from India originate from North India.

In view of the large proportion of tea imports coming from North India, it would not be possible to find alternative sources of supply for these imports.

Monday November 26

British Investment in EEC Countries

In reply to a question, the President gave the following figures of direct investment (other than in oil and insurance) by United Kingdom Companies in the countries of the European Economic Community during 1960 and 1961. He said that information was not yet available for 1962.

	1960	1961
	£ million	
West Germany	5.2	9.7
Netherlands	2.1	1.9
Belgium & Luxembourg	4.6	1.6
France	5.1	9.5
Italy	4.0	2.5
	20.9	25.3

Tuesday November 27

U.K. Exports During Next Six Months

The President was asked what was his estimate of the movement of United Kingdom exports over the next six months. In reply the Minister of State said: 'My Rt. Hon Friend's expectation is that the expansion of exports we have seen during 1962 will continue into 1963'.

Value of Government Financed Factories

Asked what was the total value of Government-financed factories now building in development districts; how this compared with a year ago; and what additional steps he proposed to take in Scotland and the North-East coast in particular, in view of rising unemployment in those regions, the Parliamentary Secretary replied: 'The estimated total value of Government-financed factories under construction in development districts and associated travel-to-work areas in October, 1961 was £16.9 million. The corresponding figure for October, 1962 was £15.2 million. As the President announced on November 8, the Government has decided to build a further nine advance factories in Scotland and North-East England.'

Publicity for N. Ireland Factories

In reply to a question as to what publicity was being given, and planned to be given, in the *Board of Trade Journal* to the new factories being erected in Northern Ireland and to the capital grants which were made available to new industry which establishes business in Ulster, the Parliamentary Secretary replied: 'The *Board of Trade Journal* frequently gives publicity to industrial developments in Northern Ireland: I would particularly refer to the issue of November 2, when the *Journal* published a list of the Government-owned factories and details of financial assistance available to new industry. A list of Government-owned factories available for rental will be published each month. Further material will be published in consultation with the Ministry of Commerce of the Northern Ireland Government of the Northern Ireland Development Council.'

In reply to a further question, the Parliamentary Secretary said that in discussions with firms wishing to expand, or to establish new projects, the department had always drawn their attention to the facilities offered by the Government of Northern Ireland. 'We shall continue to do this.'

Unemployment Questions

Numerous unemployment questions regarding development districts, certificates for industrial building and advance factories in various parts of the country are also reported in Hansard of November 27.

Voluntary Textile Agreements

A member asked the President whether the voluntary textile agreements with Asian members of the Commonwealth remained in force, in view of his unilateral imposition of a quota restriction on imports from Pakistan; and what margin of difference separated his requested limitation of exports from the voluntary offer of Pakistan.

The Minister of State replied: 'Yes, sir. Restrictions have not yet been imposed on imports from Pakistan but the situation is being carefully watched. The arrangements accepted by India and Hong Kong would remain in force. The answer to the second part of the question is about 2 million lbs. of cotton yarn.'

(*Continued on page* 1113)

Trade Fairs and Exhibitions at Home and Overseas

Changes in Trade Fairs and Exhibitions Announcements

BECAUSE of pressure on space all the various classified lists of trade fairs and exhibitions will be published in full only on the dates indicated below:

	Date Last Published	Date Next Published
United Kingdom	Nov. 2	Feb. 1
Outside Europe	Oct. 5	Jan. 4
Europe	Sept. 7	Dec. 7

Amendments and additions to the three lists will be shown in the issues of the intervening weeks.

No responsibility is taken for the standing of organizations or individuals mentioned in the lists, and dates, etc., may be subject to alteration.

The Board of Trade Export Publicity and Fairs Branch, Horse Guards Avenue, London, S.W.1 (Tel. Trafalgar 8855, Ext. 3096, Europe; 3097 United Kingdom and outside Europe) will be glad to answer general inquiries but applications should be made to the organizers or United Kingdom agents for details of costs and conditions of participation. Export Publicity and Fairs Branch can also provide information about other events which, owing to space limitation, are not included in the lists.

* indicates fair which is held annually at approximately the time stated.

† indicates fair which is held in alternate years at approximately the time stated.

Amendments and Additions to Classified Lists of Trade Fairs and Exhibitions

THE fairs and exhibitions given below are amendments and additions to the full lists published in the *Board of Trade Journal* on November 2, October 5 and September 7 respectively.

UNITED KINGDOM

Additions:

HARROGATE: 13TH NORTHERN ANTIQUE DEALERS' FAIR – September 5-12, 1963.
* At the Royal Hall. Apply, Northern Antique Dealers' Fair Ltd., 408 Leeds Road, Bradford, 3.

LONDON: THE CLUB TRADE FAIR – September 9-13, 1963.
* At Piccadilly Hotel, London, W.1. Apply, U.T.P. Exhibitions Ltd., 3 Racquet Court, Fleet Street, London, E.C.4. (Tel. Fleet Street 6444).

OUTSIDE EUROPE

Additions:

MIAMI: INTERNATIONAL BOAT SHOW – February 15-20, 1963.
* At Dinner Key Auditorium. Apply, Miami International Boat Show Inc., 1333 South Miami Avenue, Miami, 32, Florida.

SAN FRANCISCO: WESTERN ELECTRONIC SHOW AND CONVENTION 'WESCON' – August 20-23, 1963.
* Apply, Western Electronic Show and Convention, 1434 S. La Cienega Boulevard, Los Angeles, 35, California.

EUROPE

Amendment:

The Board of Trade have been informed by Fairs and Exhibitions Limited of Walmar House, 288 Regent Street, London, W.1 (Tel. Museum 5153) that they have been appointed sole agents in Great Britain for the International Spring and Autumn Fairs to be held at Zagreb from April 12-21, 1963, and September 7-22, 1963, respectively. Details about these events first appeared in the *Board of Trade Journal* of December 22, 1961.

Additions:

UTRECHT: INTERNATIONAL SHOE FAIR – April 22-24, 1963.
* Apply, Exhibition Consultants Limited, 11 Manchester Square, London, W.1. (Tel. Hunter 1951).

UTRECHT: INSTRUMENT EXHIBITION – October 8-17, 1963.
† Apply, Exhibitions Consultants Ltd., 11 Manchester Square, London, W.1. (Tel. Hunter 1951).

UTRECHT: FURNITURE AND FURNISHING FABRICS TRADE FAIR – November 4-9, 1963.
† Apply, Exhibitions Consultants Ltd., 11 Manchester Square, London, W.1. (Tel. Hunter 1951).

Royal Smithfield Show—'Pace-maker for Overseas Markets'

— Lord Rootes

LORD ROOTES, chairman of the Smithfield Show Joint Committee, and chairman of Rootes Motors Ltd., addressing a Press Conference in London on November 21 on the Royal Smithfield Show, which opens at Earls Court on December 3 until December 7, said: 'It is the live, positive approach by industry which matters in these days of exports and competition and, with the Common Market in the offing, that applies with even greater force now than ever before. In saying this I am thinking of the Royal Smithfield Show, for even those qualities will be of no avail if the product is not right. The exhibition will demonstrably confirm that the agricultural industry offers what the world needs. It is a show which can always be relied upon to set the standard here and abroad by which others of its kind are judged; this year, with its first-class machinery and top quality meat producing livestock it will be the pace maker for markets on the Continent and throughout the world'.

Lord Rootes said he knew of the forward-looking mentality of the agricultural machinery manufacturers, the skill and ability with which they had already built up an immense trade abroad as well as serving our own highly mechanized farms here in Britain, and he also knew that their armour against the attacks of their rivals was toughened by an expenditure on research of more than £20 million a year. From 1956 to 1961 the value of their production rose from about £120 million to nearly £200 million and their exports from over £70 million to over £130 million. A comparison of those exports in the first nine months of this year with the same period last year gave a further rise of £7½ million or nearly 10 per cent.

On a near record number – almost 400 – of Trades Stands, buyers from all over the world will be able to inspect and select from the vast scope of machinery and services offered by Britain, machinery which embodies the latest in technical advance. There will also be a post-war record entry of some 1,600 animals in the live and carcase sections.

British Firms at Photokina, Cologne 1963

DIRECTOR C. F. von der Heyde of the Cologne International Fair Company and Herr L. Fritz Gruber, the Commissioner for the specialized trade fair, recently held a meeting in London to announce arrangements for the International Photo and Cine Exhibition (PHOTOKINA) to be held in Cologne from March 16-24, 1963.

The last fair in this series, held in 1960, attracted 550 exhibitors from seventeen countries and it is estimated that 215,000 people visited the fair. Photographic exhibits will include those on 'Man's Humanity Towards Man' (under the auspices of the International Red Cross) and on 'Instructing – Learning and Understanding' (in conjunction with UNESCO).

It is likely that at least twenty British firms will be showing at the 1963 fair. These include Aldis Brothers Ltd., Associated Electrical Industries Ltd., Chance Pilkington Optical Works, Gnome Photographic Products Ltd., Johnsons of Hendon Ltd., Ilford Ltd., Kodak Ltd. and The Rank Organization, as well as publishers of trade periodicals and manufacturers of special paper. In addition to exhibitors from the German Federal Republic, it is expected that firms from Austria, Belgium, Czechoslovakia, Denmark, Finland, France, Hong Kong, Japan, The Netherlands, Norway, Spain, Sweden, Switzerland and the United States will also participate.

Inquiries about this and other Cologne fairs should be addressed to the United Kingdom representatives: Du Mont Publicity Ltd., 18 Queensbury Place, London, S.W.7. (Tel. Kensington 1700).

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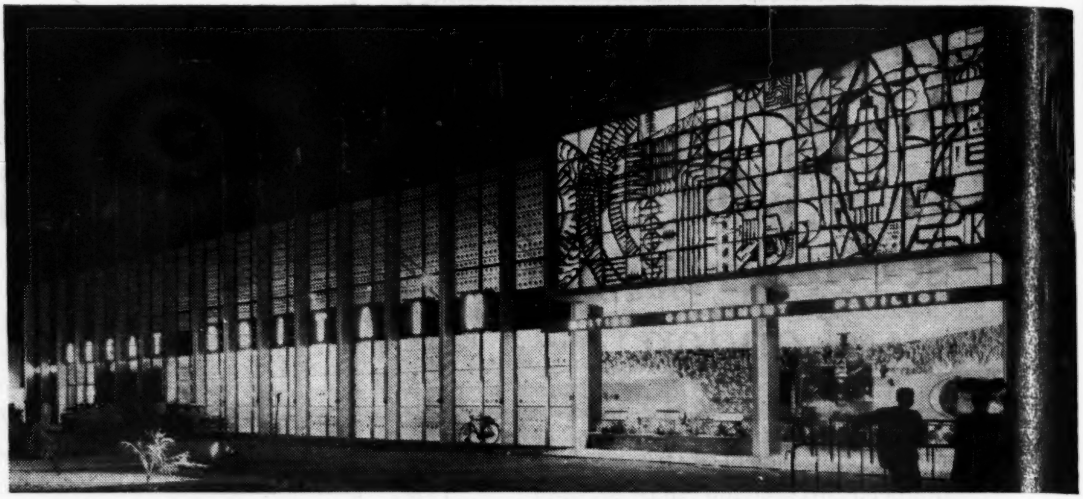
Britain and Nigeria — Partners in Progress



The exterior of the British Government Pavilion at the First Nigerian International Fair at night.

THE FIRST Nigerian International Trade Fair held at Victoria Island, Lagos, was opened on October 27, by the Governor-General, Dr. Nnamdi Azikiwe, in the presence of a distinguished gathering including Mr. Alan Green, Minister of State, Board of Trade, who had flown to Lagos specially for the occasion. By the closing date on November 18, nearly one and a quarter million people had paid for admission into the Fair. Both on Opening Day and on 'British Day,' celebrated on October 28, visitors were entertained by the pipes and drums of the 1st Battalion Royal Highland Fusiliers whose performance provided one of the greatest attractions of the Fair.

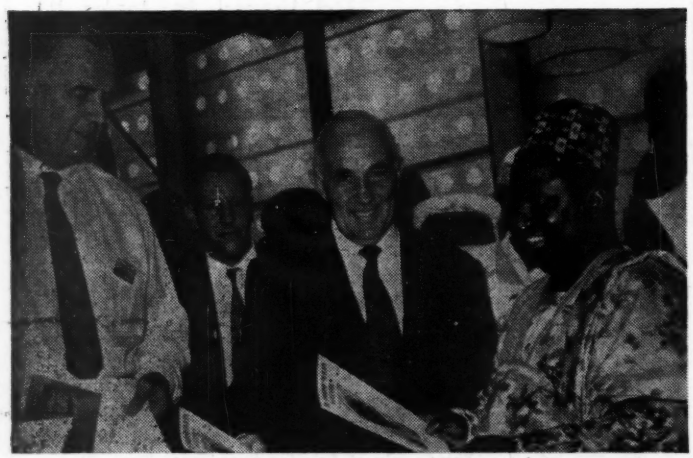
Aimed at bringing together buyers and sellers of primary products, manufacturers and purchasers of capital and consumer goods and potential investors from industrially developed countries, the Trade Fair was staged against the background of the £676 million Nigerian Six Year Development Plan announced earlier in the year. In all, over 40 Governments – from Asia, Africa, America and Europe – and some 300 individual firms and organizations representing several thousand manufacturers from Africa and overseas took part, making the Nigerian International Trade Fair the largest of its kind ever held in tropical Africa. During the period of the Fair, Lagos was also host city to delegates, many of whom visited the Trade Fair, attending the following international conferences:

C.C.T.A. Specialists' Meeting on the Long Distance Transmission of Electricity – November 1-6.

First Congress of African Railways – November 6-10.

Inter-African Committee on the Mechanization of Agriculture – November 12-16.

In the International Section the 20,000 sq. ft. British Pavilion with its attractive exterior of translucent plastic dominated by a 35 ft. by 15 ft. back lit mural in coloured fibre glass embodying the theme of electricity from generator to consumer, attracted large crowds.



Mr. Stewart-Smith, Senior Trade Commissioner in Nigeria (*centre*) with the Hon. Michael A. Buba Wazirin Shehdam, Northern Nigeria Minister of Trade and Industry (*extreme right*) looking at copies of material printed in the British Pavilion by Gestetner duplicators. Mr. F. C. Lyons, Gestetner manager, West Africa, is seen on the left.

On entering the Pavilion visitors faced an animated map illustrating the mutual advantages of trade between the two countries. Other exhibits in this section included a model showing the construction and development of the port of Lagos, a series of models and equipment such as earth moving machinery, soil equipment and transport, a working model of a hydro-electric scheme showing a dam, power station and reservoir, another in diorama featuring a tanker jetty and pipeline installation, and lastly a model demonstrating building and construction work such as schools, office blocks, roads, bridges, etc., which British civil engineers can offer Nigeria.

Then followed three group exhibits staged by the British Radio Equipment Manufacturers' Association (BREMA), the British Electrical and Allied Manufacturers' Association (BEAMA) and the Locomotive and Allied Manufacturers' Association (LAMA).

In the BREMA display leading British radio and television manufacturers exhibited a comprehensive range of radio and television receivers, record players and high fidelity audio equipment engineered to the highest standards and fully tropicalized and designed to give the best possible reception on all the broadcast radio and television programmes popular in Nigeria. A closed circuit television unit enabled visitors to see themselves – perhaps for the first time as others see them – and suggested the vast possibilities of closed circuit television in the fields of education, industry and commerce. In the BEAMA section, which occupied nearly 3,000 sq. ft., 14 member companies demonstrated how British electrical manufacturers have co-operated in development projects all over the world where the extension of electricity supplies and the growing use of powered plants and equipment are providing the foundation for new industries, irrigation projects and higher production and living standards. Equipment exhibited included power station equipment, transformers, switchgear, transmission equipment, industrial apparatus, telecommunications, street lighting equipment, small electrical components and domestic appliances. Electrical power to the British Pavilion was supplied by a 300 kW. diesel alternator, capable of supplying a township of 10,000 people, and visible through soundproof windows to all visitors to the Pavilion; this was one of the highlights of the Pavilion.

On the 78 ft. long LAMA stand the emphasis was on motive power and British made industrial and mining locomotives for use in Africa and the rest of the world. The highlight of the stand was a mock-up of the driving cab of the new Brush 2,750 h.p. Type 4 diesel-electric locomotive incorporating an actual driver's control desk and built into a shell containing a projection unit on which was shown a speeded up version of the British Railway film 'Let's go to Birmingham' which gave the impression of driving a train faster than the speed of sound. Supporting this exhibit were photographic displays, models and illuminated transparencies illustrating the wide range of British diesel and electric locomotives in service in Africa and elsewhere and including a model of the famous 'River' class steam locomotives built for Nigerian Railways by The Vulcan Foundry Ltd. There was also a drawing of the first locomotive in Nigeria built by the Hunslet Engine Company of Leeds in 1896.

(*Continued on next page*)

Cologne Sports Goods Fair

THE 22nd International Trade Fair of Sports Goods, Camping Equipment and Garden Furniture (spoga) took place in Cologne from November 4-7. Eight large halls were used to house a side variety of tents, camping equipment and garden furniture as well as a smaller but representative array of sports equipment running the whole gamut of indoor and outdoor sports and games from darts, table tennis and bar billiards to football, tennis, fishing and athletics.

According to the Fair authorities 606 firms from 22 countries vied with one another for the attention of 10,600 trade buyers. Of these latter, 2,000 came from 44 foreign countries. A claim which was well borne out by the inquiries received by British exhibitors. There were 285 foreign exhibitors from 21 countries compared with 220 in 1961.

British firms were well represented both as individual exhibitors mainly on their German agents' stands and as a national group on a joint stand sponsored by the Board of Trade in collaboration with the British Embassy, Bonn, and with the Central Office of Information whose Exhibitions Division also designed the stand. The group display consisted of 27 members of the Federation of British Manufacturers of Sports and Games, each firm having its own booth, and 16 members of the Rural Industries Bureau on a composite site. The excellent overall design of the stand coupled with first class work by the German firm which constructed it, brought the 43 exhibitors together in a harmonious whole. When dressed with a fine selection of British sports equipment the stand evoked the admiration of Fair authorities and many of the foreign visitors. More important still, it attracted a steady flow of visitors throughout the four days of the fair and the British exhibitors were able to report on the closing day that results were in general very satisfactory and in some cases considerably exceeded all expectations. They were sure in their judgment that the many weeks of preparation for the Fair had well been spent and that this type of foreign venture with the support of the Board of Trade and the Central Office of Information had immense practical value and could lead to good business both in the short term and the long term.

The German market was not unreceptive and as a result competition to enter it was keen and according to the fair authorities led to a considerable amount of international business at the fair. British exhibitors were able to consolidate their existing positions, to open new accounts and to make fresh contacts which would, it was hoped, bring more new business. The main emphasis of the British exhibitors was on sports equipment and they were in the running with more than a chance since in this field revolutionary changes in general design and appearance were neither in evidence nor expected. As a result, the best equipment of its kind was on offer by British firms at the lowest possible prices some of which were quite competitive.

Comments received from exhibitors ranged upwards through varying degrees of satisfaction to a jubilant high-note in one case of 'incredibly good results'. Although no records were broken, order books were constantly in use and enquiry pads were comfortably full and held promise of good things to come. A number of firms found the agents they sought and others had many offers from which to make their choice. An encouraging amount of entirely new business was done and some of it should produce very sizeable orders from well-known German departmental stores. Cash deals which in total ran into five figures ranged from sample orders of £100 - £200 to straight orders of up to £3,000 - £4,000. They came from all over Europe and Scandinavia including all the EFTA and EEC countries.

Seen from left to right are Herr Th. Burauen, Lord Mayor of Cologne; Mr. F. Lowy, president of the Federation of British Manufacturers of Sports and Games,; Mr. E. Melville, H.M. Minister (Economic), Bonn; and Dr. R. Klugmann, Director of Cologne Fair, looking at the gifts presented by members of the Federation to the Lord Mayor for Cologne Youth organizations.

Outside the British group, the main emphasis of the Fair was on tents and camping equipment in which the trend towards greater comforts and serviceability of cooking and heating appliances was very apparent. Tents were large but not so as to necessitate increased luggage space. According to the industry, 75 per cent. of production consists of the umbrella type of tent. The main interest in sleeping bags and air mattresses was focused on quality. Increased competition kept prices down. Garden furniture also claimed a large share of the available space and here again comfort and indeed luxury were the keynotes. Price levels were stable. Sports and camping wear in man-made fibres was in good demand and fashion continued to play an important role in this sector. Highly fashionable goods showed slight price increases.

Mr. E. Melville, H. M. Minister (Economic) at the British Embassy in Bonn, took the chair at a press reception on the second day of the fair, and welcomed the Lord Mayor of Cologne and the British exhibitors who were represented by Mr. F. Lowy, president of the Federation of British Manufacturers of Sports and Games and Mr. O. Lipton of the Rural Industries Bureau. Mr. Lipton briefly explained the purpose of the Rural Industries Bureau after which some 20 members of the national, local and trade press heard Mr. Lowy trace our modern forms of sports from their origin to nineteenth century Britain. Since which time we had developed the best methods of manufacture from the best materials and were consequently now in a position to offer the best possible equipment at the lowest possible prices. For this reason, no doubt, West Germany was Britain's biggest customer in Europe and fifth largest in the world.

Mr. Lowy then presented some £150 worth of sports goods and equipment to the Lord Mayor of Cologne for the benefit of Youth Organizations in the city.

Nigerian Trade Fair (*Continued*)

Other exhibits in the British Pavilion included the 'Sim-L-Car,' which simulates driving under realistic conditions, the first electronic computer ever to be shown in West Africa (of which one type has already been donated to University College, Ibadan) exhibited by International Computers and Tabulators Ltd., and an expeller for the production of oil from groundnuts and palm kernels. On another stand Gestetner Ltd., demonstrated colour printing and distributed coloured facsimiles of the pavilion with a calendar and a plan of the exhibition. Consumer goods were represented by displays of British textiles, pottery, glassware and hand tools.

Outside the British Pavilion nearly 300 British firms were represented on over 60 individual stands in the Trade and Engineering Sections of the Fair. Among the wide range of goods exhibited were cars, motor cycles, commercial vehicles, tractors, agricultural machinery, building materials, pumps, earth moving equipment, domestic appliances, woodworking and metal working machinery, tools, office machinery, tyres, dredging equipment and paints.

Special arrangements were made by the Organizers of the Fair for the reception of overseas visitors and during the periods of the Fair trade buyers from more than 40 countries made use of these facilities. It is estimated that of the total number of people entering the Fair some 820,000 passed through the British Pavilion. Many British manufacturers exhibiting in the British Pavilion and elsewhere reported a satisfactory number of useful trade inquiries.

THE DACOVA FASHION FAIR

Sir Andrew Noble (*second left*) British Ambassador at The Hague, with Lady Noble (*left*) together with officials of the Apparel and Fashion Industry's Association at the information stand.

THE 12th Dacova (Dames Confectie Vakbeurs - Ladies Apparel Fair) Clothing Fair opened in the RAI building in Amsterdam on November 5, 1962, with a display of ladies' fashions for spring and summer 1963. The RAI building, opened in 1961, is one of the finest exhibition halls in Europe. The display, by 114 exhibitors, was well organized and laid out. Exhibitors concentrated on the large medium-priced market for ready-to-wear clothing. The higher priced range is covered by a separate organization, the newly-formed Amsterdam Fashion Week. Attendance at the fair, which is for trade buyers and not the general public, was over 5,000.

The main emphasis was on dresses, costumes and separates but there were also displays of knitwear and underwear and some raincoats and suede and leather clothing. There were blouses and skirts of good standard, jersey clothing, suede jackets and casual wear. Styles were simple. Colours, in general, unobtrusive. In previous years, Dacova has been confined almost exclusively to Dutch exhibitors and has attracted relatively little support from other countries. This reflects the preponderence of the Netherlands industry in this medium-priced market. Until 1961, 90 per cent. of the six million ready-made dresses and ladies coats sold in the Netherlands had been of Dutch manufacture. The Netherlands is also in the export market. The Dutch industry exported 720,000 ladies coats last year. The United Kingdom is one of her best customers.

This year, for the first time, an international slant was given to Dacova by the entry of 22 exhibitors from the United Kingdom, organized by the Apparel and Fashion Industry's Association in co-operation with the Board of Trade in a grouped display. The British exhibits were colourful and attractive: brightly coloured linen outfits for teenagers; summer dresses of wrinkle-free 'Tricel'; tweed skirts shown with sleeveless bodices; a special stand with models for the fuller figures. There were new blouse stylings with shawl colours and 'Courtelle' dresses. A special display of cocktail, bridal and evening gowns attracted much attention.

The British display was by the far largest single exhibit and the only country stand. The centre piece was formed by an information stand decorated by a Union Jack and the words 'London Presents', the slogan of the Apparel and Fashion Industry's Association. The stand was open until 10 p.m. for each day of the fair and was manned continuously in relays by officials of the Association with the assistance of volunteer Dutch ladies ready to answer questions in either language.

British participation in the fair was marked by the presence of Sir Andrew Noble, British Ambassador, and Lady Noble at the inauguration.

To mark British participation in the fair, the Royal Marine band from HMS *Belfast* played during the lunch hour on the third day of the fair.

This has been a useful initiation for a group of British firms into a market where we already have a good footing, with a 12 per cent. share in Dutch imports, but where we should be able to do much more business. Firms participating reported a number of interesting inquiries and some useful orders.

Overseas Visitors at Public Works Exhibition

THE PUBLIC Works and Municipal Services Congress and Exhibition (Olympia, London, from November 12 to 17), an internationally recognized forum for discussion and a market place for machinery and materials used in municipal and public services all over the world attracted this year a record number of representatives from more than ninety overseas countries. An official at the exhibition said that never before in the history of this biennial exhibition had there been such a volume of requests for admission passes from overseas. They came from countries which included Japan, Australia, Indonesia, China, North and South America, and from practically every country in Europe.

The large numbers of trade and technical delegations and visitors who attended saw many new exhibits, a number of which were on show for the first time. These ranged from heavy earth moving equipment, boring, drilling and tunnelling equipment, municipal vehicles, road making and repairing machines, road signs, cranes, hoists, elevators, conveyors, snow ploughs, to drawing office equipment and protective clothing.

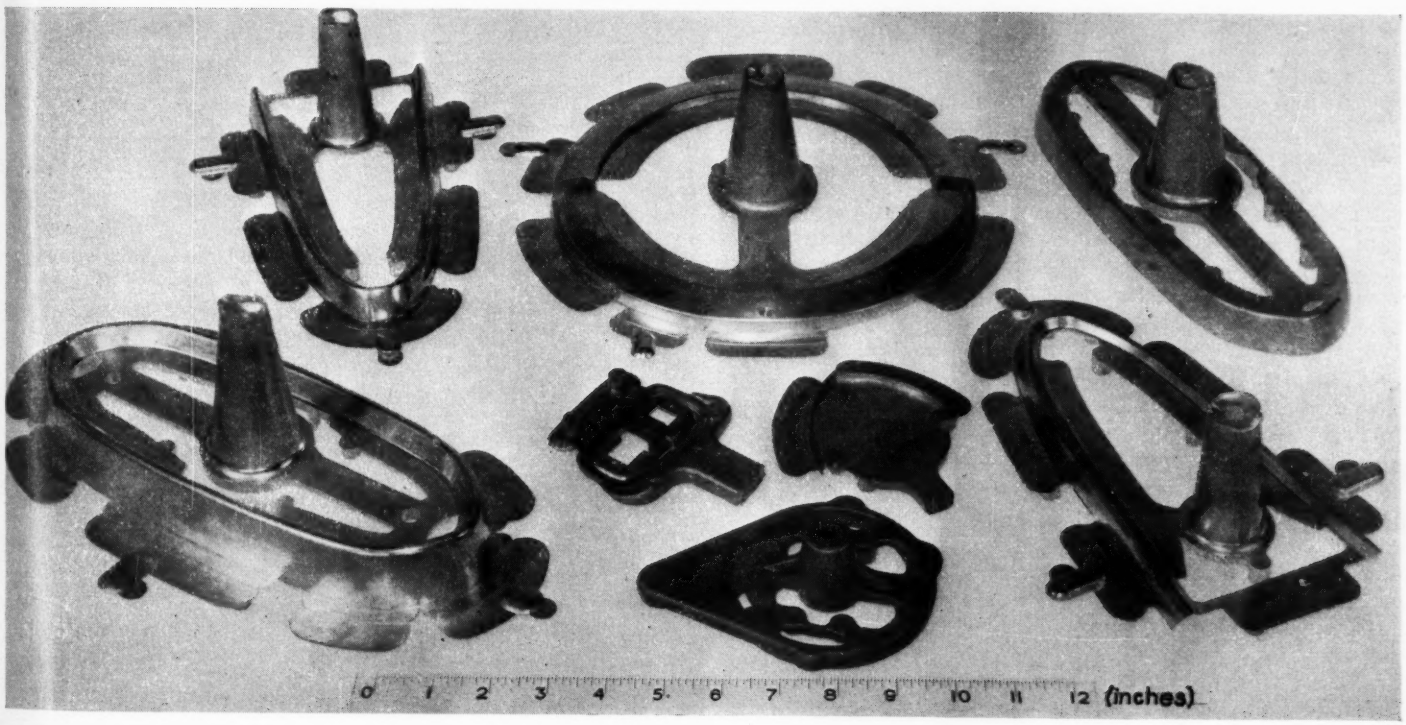
In addition to the comprehensive display of equipment the Congress afforded an opportunity for visitors to learn something of the new methods and techniques and to exchange opinions on a variety of major topical questions. Papers were given in the morning and afternoon of each day – excepting Saturday, the closing day of the show – in the three Congress halls of Olympia. Among the papers given were: 'public health engineering problems of Europe', 'The development of street lighting in Great Britain', 'Some problems connected with soil erosion and stabilization in coastal areas', and 'Planning for traffic in small towns.'

Two government departments exhibited – the Department of Scientific and Industrial Research, and the Ministry of Housing and Local Government. The DSIR featured a new road safety device which gives warning in the local highway engineer's office that roads in the area are likely to become iced. A warning system – the ringing of a bell or warning light in the office – consists of a circuit with two switches. One switch closes when the temperature drops to a predetermined level, and the other switch drops when there is moisture on the roads. When both switches are closed the warning system operates in the engineer's office, and this allows time for the department to prepare for the spreading of grit or gravel without the risk of their efforts being either too late or unnecessary.

The Ministry of Housing featured a montage of plans giving local authorities information and advice on the problems of urban development and redevelopment.

The exhibition was organized by the Municipal Agency Ltd., and was opened by Mr. Geoffrey Rippon, Minister of Public Building and Works.

ELECTRONIC CONTROL OF MACHINE TOOLS FOR CONTOUR MILLING



Die-cast components from tools produced on electronically controlled machines

A REPORT ON COMPARATIVE COSTS OF CONTOUR MILLING BY ELECTRONIC CONTROL AND CONVENTIONAL METHODS

INTRODUCTION

The Board of Trade in conjunction with the War Office and the Department of Scientific and Industrial Research, and with the co-operation of a number of machine tool using firms, have conducted tests to compare the costs of contour milling of metal shapes by electronic control and by conventional means. The tests were arranged following a recommendation in the Report on the Machine Tool Industry prepared by a Sub-Committee of the Machine Tool Advisory Council under Sir Steuart Mitchell's Chairmanship. With the permission of the participating firms, the results of these tests are now made available.

It was already known before the tests were undertaken that in some instances considerable savings could be achieved by using electronically-controlled machine tools for contour milling operations. It was also known that in other instances, production by conventional means would be cheaper. The purpose of the present tests was to provide an indication on a broad comparative basis of the areas in which savings in production costs might be achieved by electronic control, and the order of magnitude of the savings that might be possible.

It is not claimed for the results of these tests that the costs of production have been measured precisely. These will vary according to circumstances. Nor is it claimed that the particular equipment and machines on which the tests were made represent the latest and most up-to-date equipment which is available; the conventional methods adopted for the tests may not in some cases be the most economical.

While for these and other reasons the exercise may have limitations, it is hoped that the results will serve a purpose, not merely in arousing interest in the scope for reducing the production costs of contour milling operations by using electronically-controlled equipment, but also in illustrating the value for producers and users generally if firms which have themselves proved the economic advantages of machinery of advanced design, are willing to collaborate in assembling and publishing properly costed figures of what can be achieved by installing advanced and up-to-date equipment.

The Board of Trade and the other Government Departments concerned wish to record their appreciation of the assistance and ready help which has been given by the following firms, not only in actually carrying out the production on which the tests were based but also in discussing the practicability of making arrangements for the tests and in preparing for them—

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DUNLOP RUBBER CO LTD—AVIATION DIVISION

E.M.I. ELECTRONICS LTD

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The Economic Factors Underlying the Use of Electronically-Controlled Machine Tools for Contour Milling Operations

The Mitchell Committee, in their report on the United Kingdom machine tool industry published on November 11, 1960 (S.O No. 51-360) gave careful consideration to the subject of electronic control of machine tools. They noted that the electronic control of machine tools fell into two main categories – for co-ordinate positioning and for contour milling. On electronic control for co-ordinate positioning, the Committee considered that the situation was reasonably satisfactory because a number of competing firms were putting considerable effort into its development, its advantages were readily demonstrable, and its use in British industry generally was growing fast.

Regarding the more complex forms of electronic control for contour milling, however, the Committee were struck by the hesitation which the United Kingdom engineering industry had shown in their use, despite the fact that there was good reason to believe that electronic controls manufactured by British firms were ahead of those manufactured by their competitors abroad. These are the continuous cutting types of electronic control for contour milling for varying the relationship between the work and the cutter in one, two or three dimensions. The calculated programme of sequences needed to produce the required contours is transmitted to the machine tool by way of a tape.

The Committee considered that two reasons for this lack of interest were firstly, the high price of the controls (though evidence received suggested that this was caused less by technical production factors than by the very small volume of sales) and secondly and more importantly because of the almost complete lack of information about the economics of electronic controls.

The Committee concluded that the key to the problem lay in the provision of much better factual cost information to potential users, and it noted that a useful start had been made by the Royal Ordnance Factory, Nottingham which, in September 1959, produced – though it did not publish – a report on small scale tests of electronically-controlled vertical milling machines in a limited range of applications. The Commit-

tee accordingly recommended that further tests, wider in scope and under the direction of an independent authority, should be conducted so as to provide for publication the factual cost information which would help the engineering industry in considering the use of electronic control of machine tools for contour milling.

At the invitation of the Board of Trade, the War Office (Controller of Royal Ordnance Factories) and the Department of Scientific and Industrial Research, a number of firms – all leading users of machine tools – agreed to co-operate in tests based on contour milling operations on a representative range of components in various batch sizes, using both conventional contour milling machines and similar machines fitted with electronic controls. Recognizing that the usefulness of the project depended on detailed and careful costings, measured or estimated on a uniform basis, a costings format was devised in consultation with the participating firms. A copy of the form, with explanatory notes indicating the uniform rules which it was agreed should be observed in recording the costing details are at Appendices A and B.

These documents are to a large extent self-explanatory and call for no special comment. Two points which arose when considering the method of costing called for particular discussion with the participating firms:

(i) *Depreciation*

It was necessary to choose a basis which could be applied uniformly and which was both simple and provided for the comparison needed. It was decided that for the purposes of this exercise a flat 10 per cent. depreciation rate of estimated replacement value should be applied to both conventional and electronic equipment, although it was recognized that a depreciation rate of 10 per cent. for electronic equipment might be on the low side.

(ii) *Overheads*

It was recognized that firms had different methods of calculating overheads but in the interests of uniformity it was decided to calculate the "other overheads to the shop" at a fixed rate of 10s. per machine hour for both conventional and electronic methods.

The electronic control systems were the E.M.I. "two-dimensional" control and the Ferranti "three-dimensional" control systems, used with Cincinnati No. 3 vertical milling machines, Archdale vertical milling machines, a Kearney & Trecker T.F. 415 milling machine and a Hayes Tapemaster.

The conventional machines included the Cincinnati No. 3 milling machine, the rather specialized Morey single spindle machine, the Keller three spindle machine, a jig borer in conjunction with a Wickman profile grinder, the Kearney & Trecker rotary head 2D in conjunction with a Rigide copying machine, the Asquith hand profiling machine and Cincinnati Hyrotel milling machine.

For the purposes of the tests, comparative cost data were prepared relating to the profile milling of 22 components in batch sizes varying from 6 to 141 and on a one-off basis. The results are set out in Table 1. Table 2 supplements Table 1 and relates to six of the examples which involved contour milling of components on a one-off basis. It is designed to show the comparative costs in these instances of making one additional component. The relevant information in Table 1 relating to these six examples is repeated in Table 2 for convenience. Drawings of the components, and photographs of the equipment on which the tests were made, where they are available, are included in Appendix C with references to the examples with which they are associated.

It must be emphasized that the savings indicated in Table 1 illustrate what might be achieved by a firm using electronic control of contour milling operations if it were engaged in the production of shapes comparable to, but not identical with, the examples quoted, and if it were doing this throughout the year in batch quantities not very different from those mentioned in Table 1. The savings in cost illustrated would be modified if repeat or extended orders were forthcoming. The incidence of repeat batches would, however, need to be separately assessed with full regard to the possible effect of any consequential change in production techniques.

If there were to be no changes in production techniques and no additional tooling charges for an increased quantity, then it is apparent that in some cases the advantage of unit cost would be reversed beyond certain "break-even" points of batch quantity, viz;

213 in Example 1
328 „ „ 2
245 „ „ 7
326 „ „ 8

Similarly, in examples 12 and 13 where unit cost was favourable to the conventional method it would have required only a batch of three to tilt the balance of advantage in favour of the electronic system.

The following qualifications should, moreover, be noted in assessing the results of this exercise:

(a) the comparisons are restricted to a single operation, viz. profiling.

(b) The electronic control systems used were generally not new, as most were installed three or four years ago. The pace of development in this field is fast and improved designs in control equipment are now available for contour milling operations. The electronic equipment manufacturers would claim that among the advantages of installing such improved equipment would be simplified maintenance and greater machine utilization.

(c) Interest on capital has not been allowed for in the figures shown in Table 1. Generally speaking, the higher initial outlay for the electronic equipment is largely offset by the longer period for which capital is tied up in a conventional machine in order to produce a similar output. Indeed, in several cases where the productivity of the electronically-controlled machine tool is so very marked, interest on capital favours the electronic equipment as compared with the conventional.

(d) For the purpose of this exercise all figures shown have been reduced to a basis of single shift working (i.e. machine utilization possible in a working week of 42 hours). In actual fact half the components were manufactured on double shift working; and in these cases, of course, the savings are very much greater.

(e) Raw material costs were the same for both types of operation throughout and have, therefore, been excluded.

(f) In some of the examples uniformly good finish was obtained at the machine stage by both methods and no special "finishing" operation was necessary. In the majority of examples, however, a better finish was obtained by the use of electronic control.

(g) It is considered that eventually, because of the more consistent performance of the electronically-controlled machine, it should be possible to devise a modified and cheaper inspection technique when electronic control is used.

(h) The comparison in some of these tests is between relatively modern machine tools with electronic controls and conventional machine tools which for these operations would be regarded as less efficient than more up-to-date machines.

(j) In every case, the unit cost is given on the basis of the particular batch size involved. Similarly, the cost figures quoted at (q), (r), (s) and (v) in Table 1 are calculated from unit cost. It is of course significant that a substantial part of the initial expenditure is non-repetitive.

(k) The additional floor space occupied by electronic control equipment was not considered to add significantly to the cost and no estimate has therefore been included in the figures.

One participant drew special attention to substantial indirect savings resulting from the use of electronic machines because large jigs, which are expensive to store and to handle, were not required. In some cases, improved delivery was claimed as a result of substantial time savings in the design and manufacture of tools, and easier planning and machine loading.

The tests indicate that, on the basis of unit operation cost, for the quantities involved it was cheaper to use the electronic method in 18 out of the 22 examples: whereas, in four examples, the conventional method proved cheaper. Two of the operations in which the conventional method proved the cheaper involved contour milling on a one-off basis. These two examples related to die-sinking and were trial runs for subsequent batches of three or more. Although there was a considerable saving in machining time, the cost of programming more than offset this. The main factor in the use of electronically-controlled machines for die-sinking on a one-off basis is programming. If programming can be done for a cost equivilent to, or less than, the cost of a master former or model, then electronic control becomes an economic proposition. Where batches of three or more are required the saving achieved by the electronic method would be considerable. The savings achieved in a year's electronic machine production of similar work in comparable batch quantities for the 22 examples were as follows:

		% Saving on Conventional cost by using electronic method	*Savings achieved in a year's electronic machine production of similar work in comparable batch quantities*
			£
Example	1	50	9,187
	2	37	4,454
	3	—21	—1,246
	4	3½	217
	5	½	22
	6	8	566
	7	24	1,448
	8	48	3,619
	9	28	2,747
	10	42	3,272
	11	19	2,238
	12	—80	—5,911
	13	—108	—17,313
	14	73	92,169
	15	43	7,127
	16	58	11,190
	17	59	18,496
	18	74	77,558
	19	—22	—1,037
	20	46	23,030
	21	41	16,303
	22	47	7,809

In addition to the savings in unit cost referred to above, savings in time leading to increased output (and therefore increased profit) are achieved on the electronic machines. This point may be particularly illustrated by reference to example 5 where, although electronic manufacture resulted in only a small saving of unit cost, the job was finished in less than half the time. Thus more than twice as many similar components could be manufactured in any year. In 20 of the 22 examples the machining times of the electronic machines were similarly favourable and the possible extra production per annum evaluated at conventional unit cost is shown below:

		Extra number of components per annum by using electronic equipment	*Value of extra production per annum*
			£
Example	1	29	111
	2	150	226
	3	47	1,270
	4	1,511	3,708
	5	980	2,882
	6	2,932	4,447
	7	—1,881	—6,168 (see note below)
	8	—	—
	9	52	4,403
	10	1,890	1,607
	11	44	3,744
	12	131	5,023
	13	430	13,642
	14	896	112,567
	15	38	13,173
	16	2,060	16,635
	17	2,128	23,488
	18	1,174	48,389
	19	1,070	1,873
	20	2,184	47,684
	21	2,591	37,764
	22	2,868	11,532

Note: Some explanation is necessary in the case of example 7. The 'conventional' machine was a Keller 3-spindle copying miller which produced three pairs of components in one cutting cycle as against one from the E.M.I. electronically-controlled Cincinnati vertical milling machine. It is a somewhat specialized tool lacking the full flexibility of the conventional vertical milling machine: in short, it is conventional only in that it is non-electronic.

General Conclusions

The results of the tests point to the following general conclusions:

(i) Where electronically-controlled machine tools are used for the profile milling of numerous small batches of irregularly shaped components, then,

(a) Economy of unit cost may be expected and

(b) Fewer machine tools and fewer men are required for a given output.

(ii) The additional capacity thus released has a profit-earning potential which, on the evidence of the tests described in this report is substantial.

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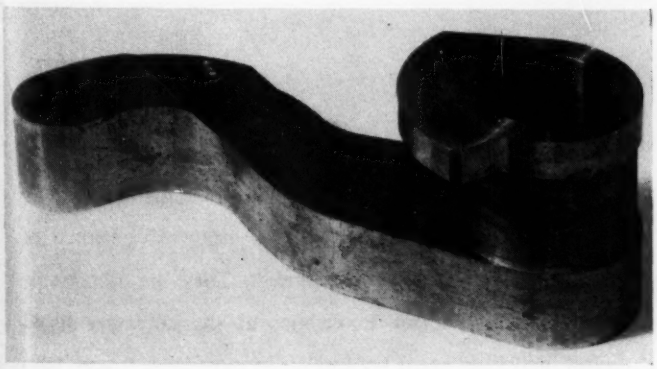
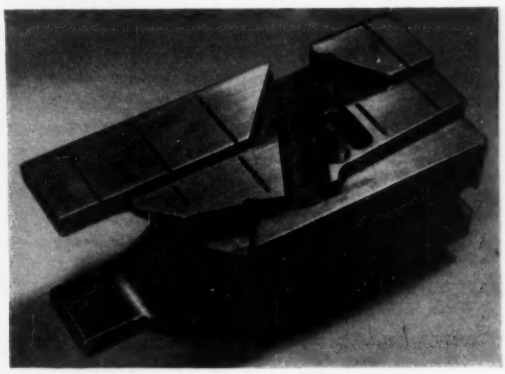
Table 1 Examples 1, 2, 3

Comparison of Machining Costs Between Electronically Controlled and Conventional Machine Tools

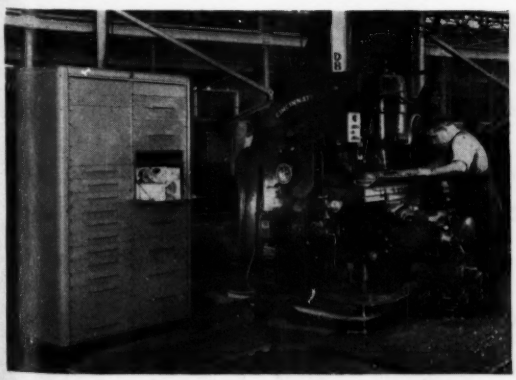
		Example 1		Example 2		Example 3	
a.	Description of component	Crank		Link		Breech Block	
b.	Component number	AN 31127		FL 6909		FL 6853	
c.	Machining operation	Mill profiles (2)		Mill profile complete		Mill crank slots and clearances, mill slots, mill radial path, mill extractor hooks and angle strips.	
d.	Material	E.N.30 4¼% nickel chrome		E.N.5 30 carbon steel		2¼% nickel chromium molybdenum gun steel.	
e.	Number in batch	24		75		8	
f.	Machine used	*Electronic* Cincinnati No. 3 vertical milling machine with E.M.I. 2 dim. profile control	*Conventional* Cincinnati No. 3 vertical milling machine	*Electronic* Cincinnati No. 3 vertical milling machine with E.M.I. 2 dim. profile control	*Conventional* Morey single spindle profile milling machine	*Electronic* Cincinnati No. 3 vertical milling machine with Ferranti 3 dim. profile control	*Conventional* Cincinnati No. 3 vertical milling machine
g.	Cost of batch	£45 12 0	£91 19 10	£70 19 0	£113 2 0	£262 3 4	£216 5 3
h.	*Cost per unit:*						
	Drawing office	£ s. d. 5 3	£ s. d. 3 0	£ s. d. 2 11	£ s. d. 8 5	£ s. d. 3 0 0	£ s. d. 1 15 10
	Jigs, tools and gauges	16 8	3 2 6	7 2	16 3	11 5 0	11 5 0
	Initial expenditure	1 1 11	3 5 6	10 1	1 4 8	14 5 0	13 0 10
	Labour	4 0	4 8	2 2	2 6	3 7 9	4 17 0
	Overheads	12 1	6 6	6 8	3 0	15 2 8	9 2 10
	Total	1 18 0	3 16 8	18 11	1 10 2	32 15 5	27 0 8
j.	Percentage saving in cost	50%	—	37%	—	—21%	—
k.	Production machine time for batch	8 hours	10 hours	15 hours	19 hours	63 hours 55 mins.	93 hours 15 mins.
l.	Percentage saving in machine hours	20%	—	21%	—	31·5%	—
m.	Machine running hours per annum	1,584	1,968	1,584	1,968	1,728	1,968
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$	198·0	196·8	105·6	103·6	27·0	21·1
p.	Number of components which could be produced per annum (n x e)	4,752	4,723	7,920	7,770	216	169
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes	£9,029	£18,104	£7,492	£11,717	£7,085	£4,564
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)	£9,029	£18,216	£7,492	£11,946	£7,085	£5,839
s.	Savings achieved in one year's production of electronic machine (i.e. difference between columns at r)	£9,187	—	£4,454	—	Loss £1,246	—
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)	+29	—	+150	—	+47	—
u.	Percentage increase in production	0·6%	—	1·9%	—	27·8%	—
v.	Value of extra production per annum valued at conventional cost (t x h)	£111	—	£226	—	£1,270	—



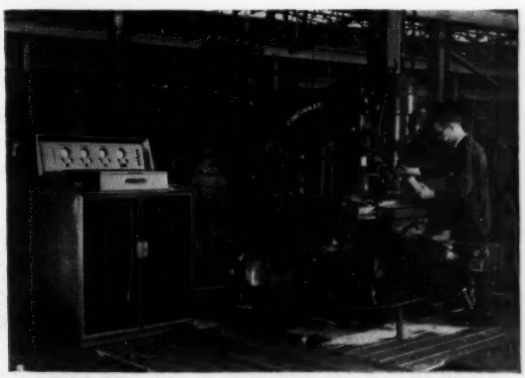
Example 1 – Crank



Example 3 – Breech Block.



Cincinnati No. 3 vertical milling machine with E.M.I. 2 dimensional control, used in examples 1, 2, 7, 8, 9, 10 and 11.



Cincinnati No. 3 vertical milling machine with Ferranti 3 dimensional control, used in examples 3, 4, 5 and 6.

Examples 4, 5, 6

		Example 4		Example 5		Example 6	
a.	Description of component	Plate FV 349734		Plate FV 349866		Plate FL 349732	
b.	Component number	Mill finish small end profile, mill slot and mill cut hole		Mill end profile and opposite end complete		Mill rough and finish small end profile	
c.	Machining operation	Aluminium alloy 36		Aluminium alloy 36		Aluminium alloy 36	
f.	Machine used	*Electronic* Cincinnati No. 3 vertical milling machine with Ferranti 3 dim. profile control	*Conventional* Cincinnati No. 3 vertical milling machine	*Electronic* Cincinnati No. 3 vertical milling machine with Ferranti 3 dim. profile control	*Conventional* Cincinnati No. 3 vertical milling machine	*Electronic* Cincinnati No. 3 vertical milling machine with Ferranti 3 dim. profile control	*Conventional* Cincinnati No. 3 vertical milling machine
g.	Cost of batch	£85 4 3	£88 6 11	£105 8 11	£105 18 3	£50 2 3	£54 12 3
h.	*Cost per unit*:						
	Drawing office	£ s. d. 13 10	£ s. d. 10	£ s. d. 12 6	£ s. d. 11	£ s. d. 9 4	£ s. d. 7
	Jigs, tools and gauges	—	—	—	—	—	—
	Initial expenditure	13 10	10	12 6	11	9 4	7
	Labour	6 2	16 8	8 5	1 0 0	3 7	10 5
	Overheads	1 7 4	1 11 7	1 17 8	1 17 11	14 11	19 4
	Total	2 7 4	2 9 1	2 18 7	2 18 10	1 7 10	1 10 4
j.	Percentage saving in cost	3·5%	—	0·5%	—	8%	—
k.	Production machine time for batch	25 hours	72 hours 30 mins.	34 hours 40 mins.	87 hours	13 hours 45 mins.	44 hours 30 mins.
l.	Percentage saving in machine hours	65·5%	—	60%	—	69%	—
m.	Machine running hours per annum	1,728	1,968	1,728	1,968	1,728	1,968
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$	69·1	27·1	49·8	22·6	125·7	44·2
p.	Number of components which could be produced per annum (n x e)	2,488	977	1,794	814	4,524	1,592
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes	£5,889	£2,399	£5,256	£2,395	£6,297	£2,415
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)	£5,889	£6,106	£5,256	£5,278	£6,297	£6,861
s.	Savings achieved in one year's production of electronic machine (i.e. difference between columns at r)	£217	—	£22	—	£566	—
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)	+1,511	—	+980	—	+2,932	—
u.	Percentage increase in production	155%	—	120%	—	184%	—
v.	Value of extra production per annum valued at conventional cost (t x h)	£3,708	—	£2,882	—	£4,447	—

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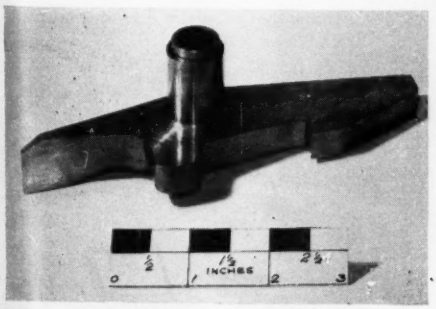
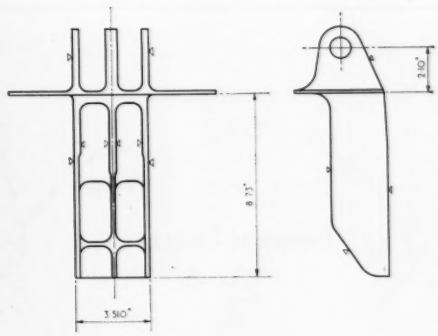
Examples 7, 8, 9

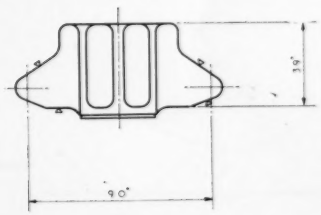
		Example 7		Example 8		Example 9	
a.	Description of component	Extractor		Inner Stop		Hook fitting	
b.	Component number	AN 44445 and 6		A 11430		SC5.17.123	
c.	Machining operation	Mill profile		Outside profile		Machining 2 off pockets approx. 2½ in. deep x 8 in. long. Having stepped walls and base. Profile of forked boss and ·150 flange.	
d.	Material	E.N.30 4½% nickel chrome		S.96 55/65 ton high tensile steel sheet		S.96 55/65 ton high tensile steel sheet	
e.	Number in batch	128		29		6	
f.	Machine used	*Electronic* Cincinnati No. 3 vertical milling machine with E.M.I. 2 dim. profile control	*Conventional* Keller 3 spindle profile milling machine	*Electronic* Cincinnati No. 3 vertical milling machine with E.M.I. 2 dim. profile control	*Conventional* Asquith hand profiling machine	*Electronic* Cincinnati No. 3 vertical milling machine with E.M.I. 2 dim. profile control	*Conventional* Cincinnati No. 3 vertical and horizontal milling machine
g.	Cost of batch	£317 6 3	£419 14 3	£33 1 4	£64 0 2	£363 8 6	£508 0 4
h.	*Cost per unit:*						
	Drawing office	£ s. d. 4 1	£ s. d. 10 11	£ s. d. 1 8	£ s. d. 8 7	£ s. d. 12 13 4	£ s. d. 12 18 4
	Jigs, tools and gauges	9 2	1 15 11	—	16 6	15 19 5	23 13 10
	Initial expenditure	13 3	2 6 10	1 8	1 5 1	28 12 9	36 12 2
	Labour	7 6	4 9	4 11	6 7	7 15 9	17 8 2
	Overheads	1 8 10	14 0	16 3	12 6	24 2 11	30 13 1
	Total	2 9 7	3 5 7	1 2 10	2 4 2	60 11 5	84 13 5
j.	Percentage saving in cost	24%	—	48%	—	28%	—
k.	Production machine time for batch	112 hours	68 hours 15 mins.	16 hours	16 hours	98½ hours	179½ hours
l.	Percentage saving in machine hours	64% (increase)	—	—	—	45%	—
m.	Machine running hours per annum	1,584	1,968	1,872	1,872	1,872	1,872
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$	14·14	28·835	117	117	19	10·4
p.	Number of components which could be produced per annum (n x e)	1,810	3,691	3,393	3,393	114	62
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes	£4,487	£12,102	£3,874	£7,493	£6,905	£5,250
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)	£4,487	£5,935	£3,874	£7,493	£6,905	£9,652
s.	Savings achieved in one year's production of electronic machine (i.e. difference between columns at r)	£1,448	—	£3,619	—	£2,747	—
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)	—1,881	—	—	—	+52	—
u.	Percentage increase in production	Decrease of 51%	—	—	—	84%	—
v.	Value of extra production per annum valued at conventional cost (t x h)	£6,168 (Reduction)	—	—	—	£4,403	—



Example 7 – Extractor.

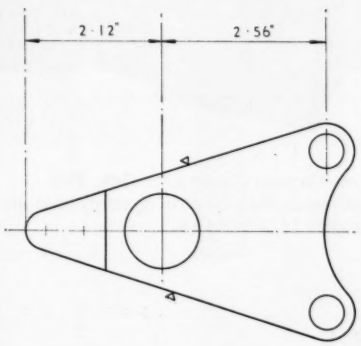
Asquith hand profiling machine used for the conventional method in examples 8 and 10.





SC. 5 · 17 · 123
HOOK FITTING

Example 9 – Hook Fitting.



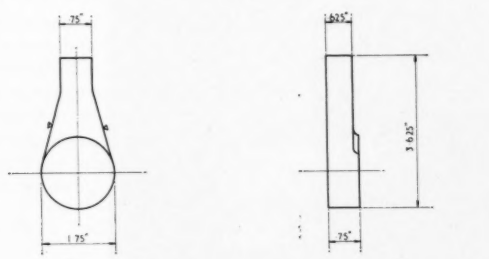
MACHINE OPERATIONS MILL OUTSIDE PROFILE

Example 8 – Inner Stop. A11430

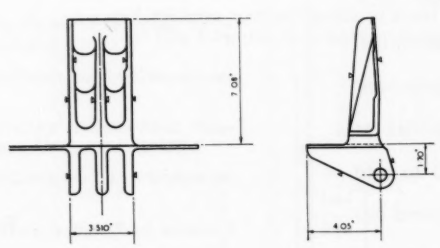
Examples 10, 11, 12

		Example 10		Example 11		Example 12	
a.	Description of component	Stop lever		Hinge fitting		Punch for dynamo end bracket die-casting mould.	
b.	Component number	A 11487		SC5.17.163		—	
c.	Machining operation	Outside profile		Milling 2 off 1 in. deep stepped pockets approx. 6 in. long with profiled walls and ends. Maintaining ·20 in. wall thickness also profile of forked boss and a ·150 in. flange.		Machining complete punch form from solid punch block less taper turned bore.	
d.	Material	S.96 55/65 ton high tensile steel sheet		S.96 55/65 ton high tensile steel sheet		High carbon chrome die steel	
e.	Number in batch	141		6		1	
f.	Machine used	*Electronic* Cincinnati No. 3 vertical milling machine with E.M.I. 2 dim. profile control	*Conventional* Asquith hand profiling machine	*Electronic* Cincinnati No. 3 vertical milling machine with E.M.I. 2 dim. profile control	*Conventional* Cincinnati No. 3 vertical and horizontal milling machine	*Electronic* Hayes Tapemaster (Ferranti Mark IV control equipment)	*Conventional* Jig borer, milling machine and lathe
g.	Cost of batch	£69 13 7	£119 13 9	£415 6 8	£510 11 10	£69 2 7	£38 6 11
h.	*Cost per unit:*	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.
	Drawing office	4	2 4	12 15 10	11 13 4	55 19 6	—
	Jigs, tools and gauges	—	4 10½	28 17 6	38 13 1	—	—
	Initial expenditure	4	7 2½	41 13 4	50 6 5	55 19 6	—
	Labour	2 6	3 5	7 2 7	13 4 9	4 10 10	15 2 9
	Overheads	7 1	6 4½	20 8 7	21 10 10	8 12 3	23 4 2
	Total	9 11	17 0	69 4 6	85 2 0	69 2 7	38 6 11
.	Percentage saving in cost	42%	—	19%	—	—80%	—
k.	Production machine time for batch	28 hours 36 mins.	35 hours 55 mins.	79 hours 38 mins.	115 hours 10 mins.	10½ hours	33 hours
l.	Percentage saving in machine hours	20%	—	31%	—	68%	—
m.	Machine running hours per annum	1,872	1,872	1,872	1,872	2,016	2,016
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$	65·5	52·1	23·5	16·2	192	61·1
p.	Number of components which could be produced per annum (n x e)	9,236	7,346	141	97	192	61
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes	£4,579	£6,244	£9,761	£8,255	£13,273	£2,339
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)	£4,579	£7,851	£9,761	£11,999	£13,273	£7,362
s.	Savings achieved in one year's production of electronic machine (i.e. difference between columns at r)	£3,272	—	£2,238	—	Loss £5,911	—
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)	+1,890	—	+44	—	+131	—
u.	Percentage increase in production	26%	—	45%	—	215%	—
v.	Value of extra production per annum valued at conventional cost (t x h)	£1,607	—	£3,744	—	£5,023	—

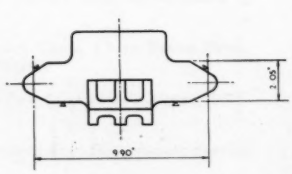
MACHINE OPERATIONS MILL OUTSIDE PROFILE



Example 10 – Stop Lever.



Example 11 – Hinge Fitting.



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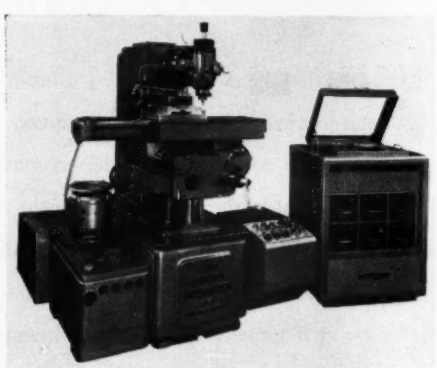
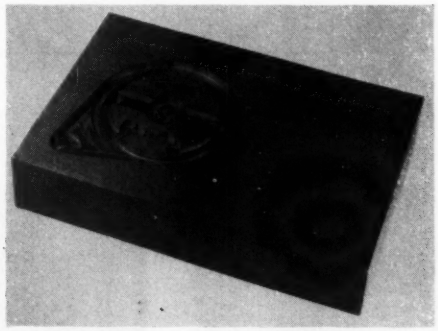
HINGE FITTING

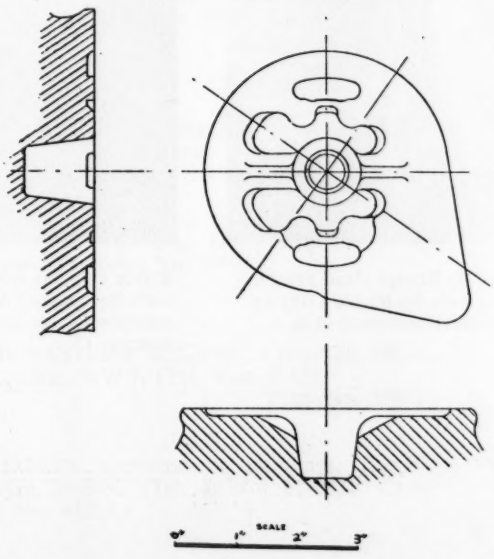


Hayes/Ferranti Tapemaster (Mk. IVB Continuous Path Control System) used in examples 12, 13 and 14.

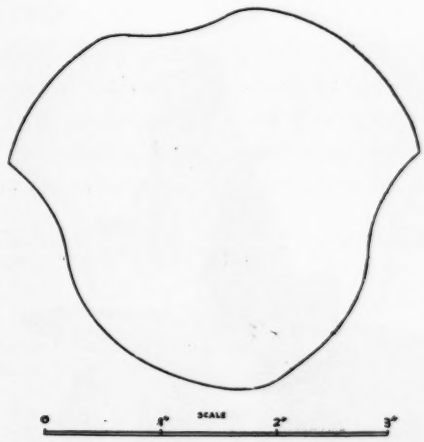
Examples 13, 14

		Example 13		Example 14	
a.	Description of component	Die for dynamo end bracket die-casting mould		Cam master formers	
b.	Component number	—		—	
c.	Machining operation	Machining complete die form from solid die block		Machining complete cam form from a circular blank	
d.	Material	High carbon chrome die steel		High carbon chrome die steel	
e.	Number in batch	1		1	
f.	Machine used	*Electronic* Hayes Tapemaster (Ferranti Mark IV control equipment)	*Conventional* Jig borer, milling machine and lathe	*Electronic* Hayes Tapemaster (Ferranti Mark IV control equipment)	*Conventional* Jig borer and Wickman profile grinder
g.	Cost of batch	£66 1 6	£31 14 6	£34 3 11	£125 12 8
h.	*Cost per unit:*	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.
	Drawing office	60 6 6	—	31 6 5	104 0 0
	Jigs, tools and gauges	—	—	—	—
	Initial expenditure	60 6 6	—	31 6 5	104 0 0
	Labour	1 13 4	12 9 0	16 8	8 7 0
	Overheads	4 1 8	19 5 6	2 0 10	13 5 8
	Total	66 1 6	31 14 6	34 3 11	125 12 8
j.	Percentage saving in cost	—108%	—	73%	—
k.	Production machine time for batch	4 hours	27 hours	2 hours	18 hours
l.	Percentage saving in machine hours	85%	—	89%	—
m.	Machine running hours per annum	2,016	2,016	2,016	2,016
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$	504	74·6	1,008	112
p.	Number of components which could be produced per annum (n x e)	504	74	1,008	112
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes	£33,302	£2,348	£34,469	£14,071
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)	£33,302	£15,989	£34,469	£126,638
s.	Savings achieved in one year's production of electronic machine (i.e. difference between columns at r)	Loss £17,313	—	£92,169	—
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)	+430	—	+896	—
u.	Percentage increase in production	581%	—	800%	—
v.	Value of extra production per annum valued at conventional cost (t x h)	£13,642	—	£112,567	—





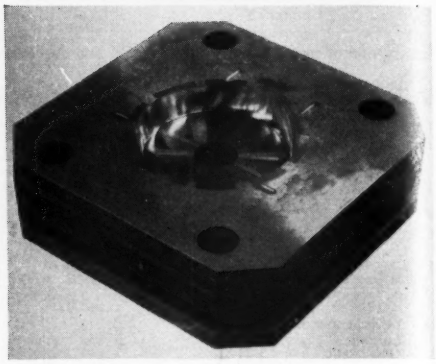
Example 13 – Die for Dynamo end bracket Die Casting Mould. (Scale in inches.)



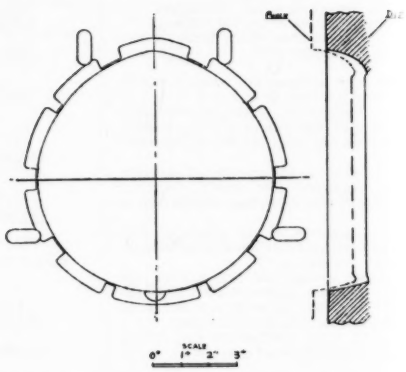
Example 14 – Cam Master Former. (Scale in inches.)

Example 15

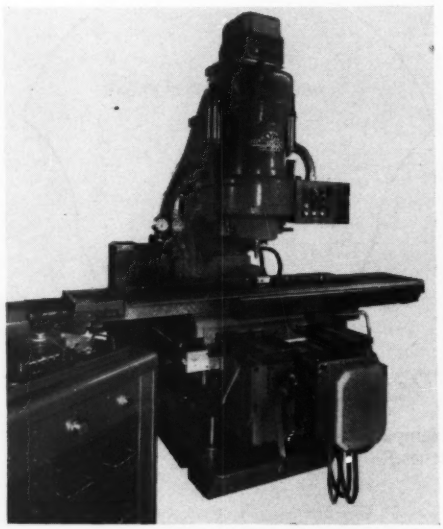
		Example 15					
a.	Description of component	Punch and die					
b.	Component number	—					
c.	Machining operation	Main form of die already turned peak form machining only complete form of punch machines by electronic control					
d.	Material	High carbon chrome die steel					
e.	Number in batch	1					
f.	Machine used	*Electronic* Kearney & Trecker T.F.415 (Ferranti Mark IV control equipment)			*Conventional* Kearney & Trecker Rotary head 2D and Rigide copying machine		
g.	Cost of batch	£198 3 11			£346 13 4		
h.	*Cost per unit:*	£ s. d.	£ s. d.		£ s. d.	£ s. d.	
	Drawing office	117 3 5			27 10 0		
	Jigs, tools and gauges	—					
	Initial expenditure		117 3 5			27 10 0	
	Labour		17 10 0			92 10 0	
	Overheads		63 10 6			226 13 4	
	Total		198 3 11			346 13 4	
j.	Percentage saving in cost		43%			—	
k.	Production machine time for batch		42 hours			200 hours	
l.	Percentage saving in machine hours		79%			—	
m.	Machine running hours per annum		2,016			2,016	
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$		48			10	
p.	Number of components which could be produced per annum (n x e)		48			10	
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes		£9,513			£3,467	
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)		£9,513			£16,640	
s.	Savings achieved in one year's production of electronic machine (i.e. difference columns at r)		£7,127			—	
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)		+38			—	
u.	Percentage increase in production		380%			—	
v.	Value of extra production per annum valued at conventional cost (t x h)		£13,173			—	



Example 15 – Die.

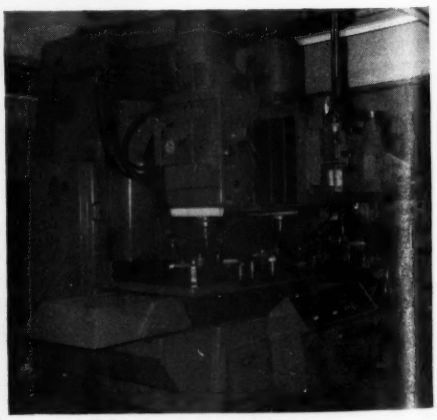


Example 15 – Punch and Die. (Scale in inches.)



Kearney & Trecker/C.V.A. TF.415 with Ferranti Mk. IVB Continuous Path Control System, used in example 15.

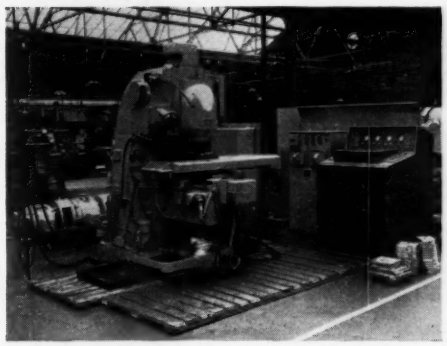
Kearney & Trecker 2D Rotary Head Machine, used in conjunction with the Rigide Copying machine for the conventional method in example 15.



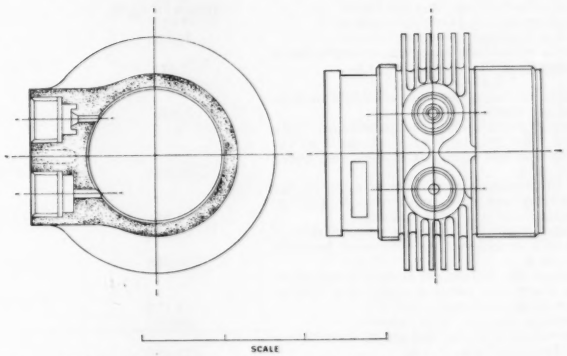
Rigide Copying machine used in conjunction with the Kearney & Trecker 2D Rotary Head machine for the conventional method in example 15.

Example 16

		Example 16	
a.	Description of component	Second stage cylinder	
b.	Component number	ACM 15625	
c.	Machining operation	Mill finish flange diameter and mill cooling fins	
d.	Material	S.28 high tensile nickel chrome steel	
e.	Number in batch	50	
f.	Machine used	*Electronic* Archdale/Ferranti vertical milling machine	*Conventional* Vertical milling machine
g.	Cost of batch	£170 12 6	£403 15 0
h.	*Cost per unit:*	£ s. d. £ s. d.	£ s. d. £ s. d.
	Drawing office	12 11½	5 7
	Jigs, tools and gauges	17 5	17 5
	Initial expenditure	1 10 4½	1 3 0
	Labour	6 3	3 1 1
	Overheads	1 11 7½	3 17 5
	Total	3 8 3	8 1 6
j.	Percentage saving in cost	58%	—
k.	Production machine time for batch	36 hours	282 hours
l.	Percentage saving in machine hours	87%	—
m.	Machine running hours per annum	1,728	1,920
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$	48	6·8
p.	Number of components which could be produced per annum (n x e)	2,400	340
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes	£8,190	£2,746
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)	£8,190	£19,380
s.	Savings achieved in one year's production of electronic machine (i.e. difference between columns at r)	£11,190	—
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)	+2,060	—
u.	Percentage increase in production	605%	—
v.	Value of extra production per annum valued at conventional cost (t x h)	£16,635	—



Archdale/Ferranti vertical milling machine, used in examples 16, 17, 18, 19, 20, 21 and 22.



Example 16 – Second Stage Cylinder. (Scale in inches.)

Regional Organization of the Board of Trade

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D. A. Wilson, C.B.E.

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Barry Kay, C.B.E. Telex No. 25991.)

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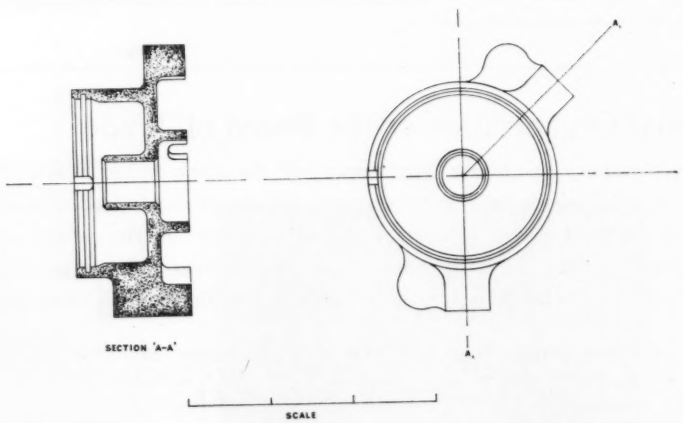
C. J. A. Whitehouse, O.B.E.

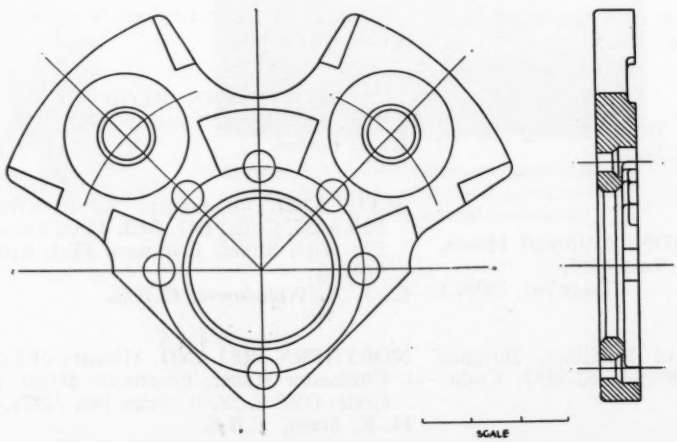
NORTHERN IRELAND. Ministry of Commerce (Northern Ireland), Chichester House, Chichester Street, Belfast. (Tel. Belfast 28271. Code: OBE 2. 28271. Telex No. 74578.)
H. E. Jones, C.B.E.

Examples 17, 18, 19

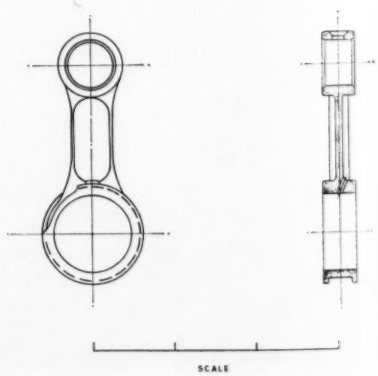
		Example 17		Example 18		Example 19	
a.	Description of component	Cylinder		Torque plate		Connecting rod	
b.	Component number	AHM 4824		AH 41412		ACO 29053	
c.	Machining operation	Rough and finish outside form complete		Rough and finish mill complete including annular recesses, pad recesses, and large C' bore		Mill complete with the exception of .437 in. wide slot	
d.	Material	S.80 high tensile stainless steel		L.42 aluminium alloy		E.N. 36 55-ton alloy steel	
e.	Number in batch	20		10		100	
f.	Machine used	*Electronic* Archdale/Ferranti vertical milling machine	*Conventional* Horizontal and vertical milling machines	*Electronic* Archdale/Ferranti vertical milling machine	*Conventional* Hydrotel, combination turrent lathe, centre lathe and drilling machine	*Electronic* Archdale/Ferranti vertical milling machine	*Conventional* Vertical milling machine
g.	Cost of batch	£90 10 0	£220 15 0	£105 10 0	£412 3 4	£211 5 0	£175 0 0
h.	*Cost per unit:*	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.
	Drawing office	1 10 2	1 5 0	4 3 8	7 18 0	3 4½	1 9½
	Jigs, tools and gauges	1 7 6	6 12 6	4 7 9	31 0 0	3 8½	3 8½
	Initial expenditure	2 17 8	7 17 6	8 11 5	38 18 0	7 1	5 6
	Labour	5 8½	1 5 5½	8 9	1 0 4	6 10	13 1
	Overheads	1 7 1 11/16	1 17 9 11/16	1 10 10	1 6 0	1 8 4	16 5
	Total	4 10 6	11 0 9	10 11 0	41 4 4	2 2 3	1 15 0
j.	Percentage saving in cost	59%	—	74%	—	−21%	—
k.	Production machine time for batch	12 hours 10 mins.	54 hours	6 hours 50 mins.	14 hours 10 mins.	60½ hours	107 hours
l.	Percentage saving in machine hours	77%	—	52%	—	43%	—
m.	Machine running hours per annum	1,728	1,920	1,728	1,920	1,728	1,920
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$	142	35·6	252·9	135·5	28·6	17·9
p.	Number of components which could be produced per annum (n x e)	2,840	712	2,529	1,355	2,860	1,790
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes	£12,851	£7,859	£26 680	£55,849	£6,042	£3,133
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)	£12,851	£31,347	£26,680	£104,238	£6,042	£5,005
s.	Savings achieved in one year's production of electronic machine (i.e. difference between columns at r)	£18,496	—	£77,558	—	Loss £1,037	—
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)	+2,128	—	+1,174	—	+1,070	—
u.	Percentage increase in production	299%	—	87%	—	60%	—
v.	Value of extra production per annum valued at conventional cost (t x h)	£23,488	—	£48,389	—	£1,873	—



Example 17 – Cylinder. (Scale in inches.)



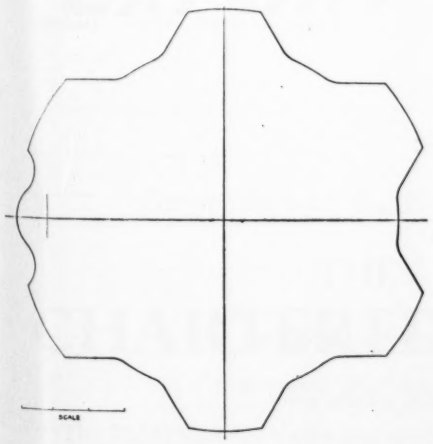
Example 18 – Torque Plate. (Scale in inches.)



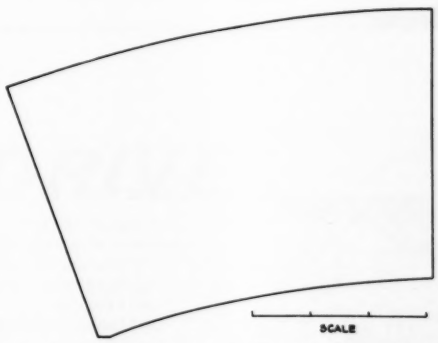
Example 19 – Connecting Rod. (Scale in inches.)

Examples 20, 21, 22

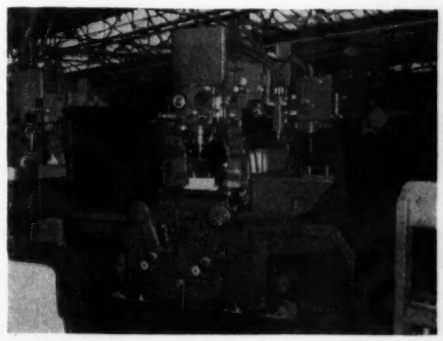
		Example 20		Example 21		Example 22	
a.	Description of component	Template		Template		Cylinder	
b.	Component number	AM 35626		A.O. 94813		AHM 5028	
c.	Machining operation	Mill profile complete		Mill profile complete		Rough and finish O/form	
d.	Material	⅛ in. gauge steel		⅛ in. gauge steel		Stainless steel	
e.	Number in batch	1		1		60	
f.	Machine used	*Electronic* Archdale/Ferranti vertical milling machine	*Conventional* Vertical milling machine	*Electronic* Archdale/Ferranti vertical milling machine	*Conventional* Hand work on bench	*Electronic* Archdale/Ferranti vertical milling machine	*Conventional* Hydrotel
g.	Cost of batch	£11 16 9	£21 16 8	£8 12 0	£14 11 6	£128 5 0	£241 5 0
h.	*Cost per unit:*	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.	£ s. d. £ s. d.
	Drawing office	8 8 0	—	6 4 0	—	11 6	8 0
	Jigs, tools and gauges	—	—	—	—	9 2	1 3 8
	Initial expenditure	8 8 0	—	6 4 0	—	1 0 8	1 11 8
	Labour	1 5 9	9 18 0	15 2	7 11 6	3 9½	13 3
	Overheads	2 3 0	11 18 8	1 12 10	7 0 0	18 3½	1 15 6
	Total	11 16 9	21 16 8	8 12 0	14 11 6	2 2 9	4 0 5
j.	Percentage saving in cost	46%	—	41%	—	47%	—
k.	Production machine time for batch	45 mins.	16 hours	38 mins.	14 hours	25 hours	90 hours
l.	Percentage saving in machine hours	95%	—	95%	—	72%	—
m.	Machine running hours per annum	1,728	1,920	1,728	1,920	1,728	1,920
n.	Number of batches which could be produced per annum $\left(\frac{m}{k}\right)$	2,304	120	2,728·5	137·1	69·1	21·3
p.	Number of components which could be produced per annum (n x e)	2,304	120	2,728	137	4,146	1,278
q.	Cost per annum of running machine fully loaded with this type of work (p x h) i.e. similar but not identical shapes and batch sizes	£27,274	£2,620	£23,465	£1,997	£8,862	£5,139
r.	Cost to produce the number of components comprising one year's electronic production (i.e. electronic production at p x h)	£27,274	£50,304	£23,465	£39,768	£8,862	£16,671
s.	Savings achieved in one year's production of electronic machine (i.e. difference between columns at r)	£23,030	—	£16,303	—	£7,809	—
t.	Increased production per annum obtained by using electronic control equipment (difference between columns at p)	+2,184	—	+2,591	—	+2,868	—
u.	Percentage increase in production	1,820%	—	1,891%	—	224%	—
v.	Value of extra production per annum valued at conventional cost (t x h)	£47,684	—	£37,764	—	£11,532	—



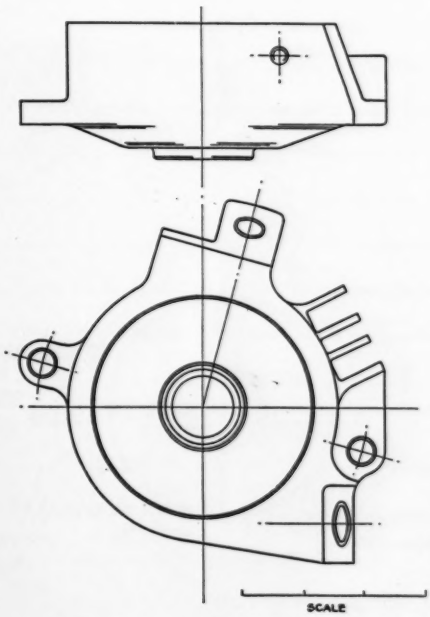
Example 20 – Template. (Scale in inches.)



Example 21 – Template. (Scale in inches.)



Cincinnati Hydrotel, used for the conventional method in examples 18 and 22.



Example 22 – Cylinder. (Scale in inches.)

Table 2

Supplementary Information about Examples Produced on a 1-off Basis

	Component	Number machined	Type of Machine	Direct Labour	Direct Wages	Cost Overheads	Initial Expenses	Total	Cost of one Extra Component
Example No.	a	b	c	d	e	f	g	h	j (e and f)
					£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
12	Punch	1	Hayes Tapemaster with Mk. IV control (and (conventional lathe work)	10½ hrs.	4 10 10	8 12 3	55 19 6	69 2 7	13 3 1
			Jig borer, milling machine lathe	33 hrs.	15 2 9	23 4 2	—	38 6 11	38 6 11
13	Die	1	Hayes Tapemaster with Mk. IV control	4 hrs.	1 13 4	4 1 8	60 6 6	66 1 6	5 15 0
			Jig borer, milling machine lathe	27 hrs.	12 9 0	19 5 6	—	31 14 6	31 14 6
14	Cam master former.	1	Hayes Tapemaster with Ferranti Mk. IV control	2 hrs.	16 8	2 0 10	31 6 5	34 3 11	2 17 6
			Jig borer and Wickman profile grinder	18 hrs.	8 7 0	13 5 8	104 0 0	125 12 8	21 17 8
15	Punch and die	1	Kearney & Trecker TF 415 with Mk. IV control	42 hrs.	17 10 0	63 10 6	117 3 5	198 3 11	81 0 6
			Kearney & Trecker rotary head 2D and Rigide	200 hrs.	92 10 0	226 13 4	27 10 0	346 13 4	319 3 4
20	A.M. 35626 template	1	Archdale/Ferranti 34 in. vertical mill	2 hours 44 mins.	1 5 9	2 3 0	8 8 0	11 16 9	3 8 9
			Vertical mill	19 hrs.	9 18 0	11 18 8	—	21 16 8	21 16 8
21	A.O. 94813 template	1	Archdale/Ferranti 34 in. vertical mill	1 hour 38 mins.	15 2	1 12 10	6 4 0	8 12 0	2 8 9
			Bench	14½ hrs.	7 11 6	7 0 0	—	14 11 6	14 11 6

APPENDIX A

Comparative Cost of Machining Work on Machine Tools Controlled by Electronic and Conventional Means

Name of firm.....

Description of Machine and Electronic Equipment:

(a) *Electronic:* .....

(b) *Conventional:* .....

Component No.: .....

Component Description: .....

Description of Machining Operations under Consideration:.....

.....

.....

Batch Quantity:.....

Estimated running hours per week: (see note).....

Type of Expense	*Cost per good component produced* — *Electronic* £ s. d.	*Conventional* £ s. d.
1. *INITIAL EXPENDITURE*		
(a) *Drawing Office* (see note)		
(i) Process Layout		
(ii) Jigs, Tools and Gauges		
(iii) Preparation of Co-ordinate Drawing		
(iv) Programming Tape		
(v) Tele-Typing Tape		
(vi) Other		
(b) Purchasing and Processing of Magnetic Tape		
(c) Jigs, Tools and Gauges (see note)	_____	_____
	_____	_____

	Cost per good component produced — *Electronic* £ s. d.		*Conventional* £ s. d.	
	Skilled	*Unskilled*	*Skilled*	*Unskilled*
2. *PRIME COST*				
(a) Direct Material				
(b) Direct Wages (see note)				
(i) Marking out, setting up				
(ii) Machining				
(iii) Finishing				
(iv) Inspection of work	_____	_____	_____	_____
	_____	_____	_____	_____
		_____		_____
3. *OVERHEADS*				
(i) (a) Depreciation (see note)				
(b) Maintenance, inspection and testing (see note)				
(c) Supervision (see note)				
(d) Other (see note)				
(ii) Other overheads to the shop, including general overheads (see note)		_____		_____
4. *DEFECTIVE WORK*				
Rectification (see note)		_____		_____
Total		_____		_____

Number of components worked..... .....

Number of good components produced..... .....

Period of Manufacture..... .....

Appendix B Explanatory Notes

General

It is assumed that the work being compared is identical in all respects. If any selection has been exercised or difference arisen, (e.g. forgings with excess material) details would be appreciated.

Estimated Running Hours

(a) The estimated running hours per week of each type of machine for a representative or average week.

(b) The estimated or actual hours spent on each of the following items for the particular job being reviewed:–

Drawing office
Jig and tool manufacture
Setting up machines
Machining
Finishing

1. Initial Expenditure

(a) *Drawing office* expenditure has been sub-divided as shown, so as to cover all probable methods of tape preparation.

(c) *Jigs, tools and gauges* at cost (material, labour and overheads excluding Drawing Office charges) or purchase price.

2. Prime Cost

(b) *Direct Wages.* Included in this item should be piece-work price and industrial bonus, or time rate plus any bonus. Overtime and night shift premiums should be included in general overheads, unless it is the policy to run electronically-controlled equipment on permanent shift work and conventional equipment on day work only in which case include additional payments as direct wages.

3. Overheads

(i) (a) *Depreciation.* This item should include depreciation of the machine tool and all associated electronic equipment (e.g. teleprinters, computers, card punches). Depreciation to be 10 per cent. on estimated replacement value.

(b) *Maintenance, inspection and testing.* The cost of maintenance (particularly on some types of electronically controlled machines) can be considerable with a consequent loss of running time. Included also should be the cost of any periodic inspection or testing of electronic equipment. The mechanical maintenance of the machine tool whether electronically controlled or not should be included in general overheads.

(c) *Supervision.* An estimate of the cost of any *additional* supervision accorded to these particular machines.

(d) *Other.* Any other overhead expenses peculiar to one or other type of manufacture should be shown here.

(ii) *Other overheads to the shop.* This heading is intended to include all other overheads such as consumable stores, general supervision, employee benefits, overtime and nightshift premiums (other than at 2 above), office expenses, heating, power, etc. The items included would generally be the same for conventional and electronic methods and it is suggested that these should be calculated at the rate of 10s. an hour.

4. Defective Work

Rectification

The cost of rectification should be the sum of labour charges (if any), material and overheads incurred in rectifying defective components. The expenditure will not have been included elsewhere in the statement.

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For trade with the East consult

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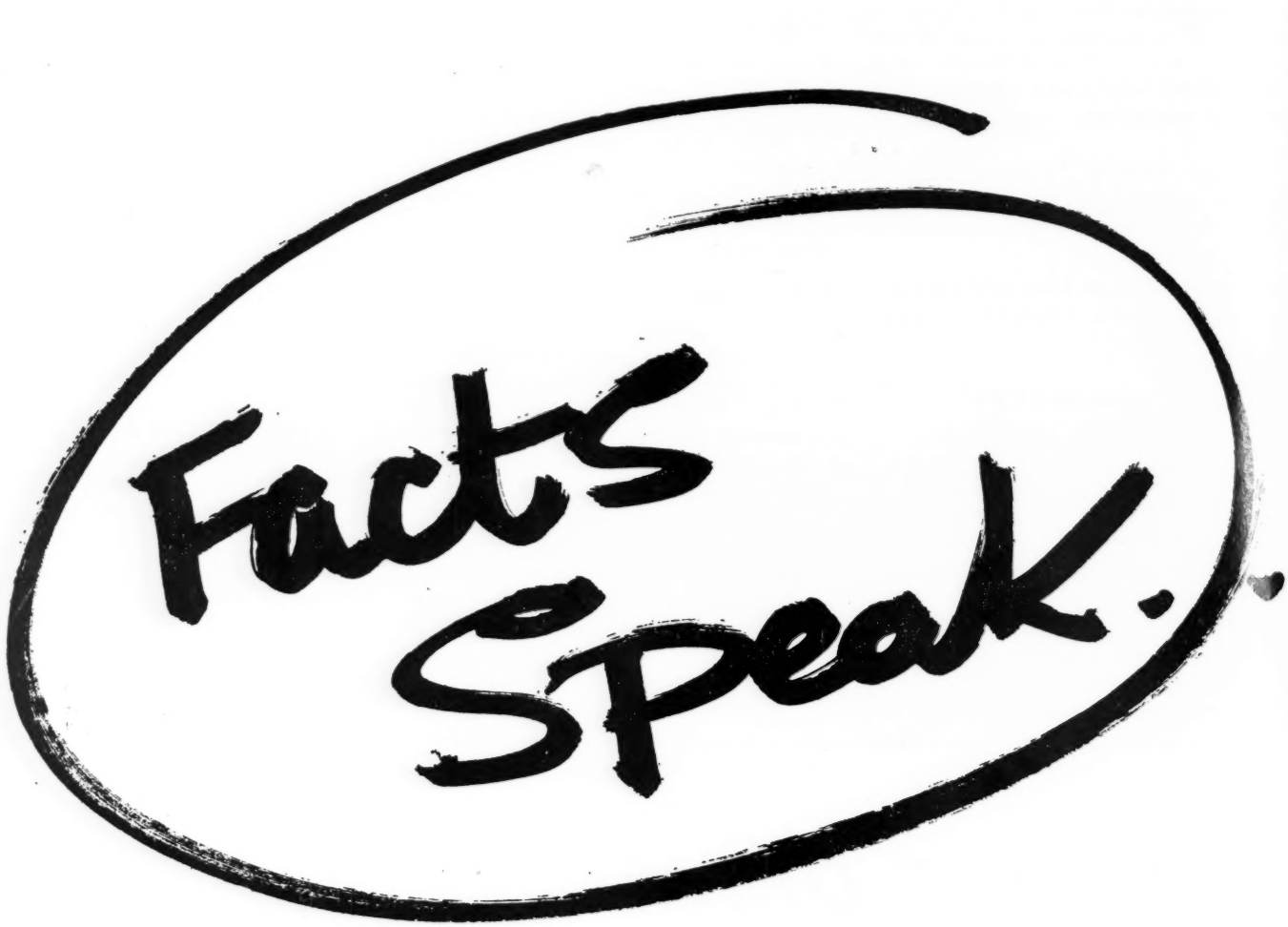

In reply to a recent questionnaire sent out by the British Institute of Management to selected companies as to the sources from which their commercial information was obtained, the *Board of Trade Journal* took second highest place amongst the 38 journals mentioned.

Inquiries

If within the London Postal Area

Advertisement Section, H.M. Stationery Office, Room D. 63, Atlantic House, Holborn Viaduct, London, E.C.1. CITy 9876 (Ext. 147 and 148)

If outside the London Postal Area

Cowlishaw & Lawrence (Advertising) Ltd., 16 Farringdon Street, London, E.C.4. CITy 3718

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Irish Linen in Dusseldorf

EIGHTEEN COMPANIES participated in the 'Legend of Linen Exhibition' recently held in Dusseldorf, Germany, and organized by the Irish Linen Guild. The exhibition was opened by Mr. Eugene Melville, H.M. Minister (Economic) of the British Embassy in Bonn. In his speech, Mr. Melville referred briefly to the historic origins of the Irish Linen industry, and emphasized how the Guild was seeking to promote the sale of Irish linen, not only throughout the United Kingdom, but in world markets. In 1961, exports of linen products earned foreign currency to a value of some £12 million. This was a very worthy achievement by one industry alone, well justifying its position as Ulster's major industry.

The Exhibition covered broadly the whole field of linen products including table linen, bed linen, dress materials, suitings, furnishing fabrics and fine linen goods, including demonstrations of hand painting and linen embroidery. The exhibition was organized in three parts. The first consisted of a series of dimensional displays in full colour depicting graphically and editorially the history and production of linen, together with its commercial uses and various types. The second depicted the aims and functions of the Irish Linen Guild on behalf of the Linen Industry of Northern Ireland, particularly in its effort to promote and advertise Irish Linen throughout the world. The third comprised a series of four room settings featuring a bathroom, dining room, bed room and kitchen, in each of which settings, Irish Linen was displayed appropriate to that particular room. This section of the Exhibition enjoyed the co-operation of one of Dusseldorf's leading departmental stores.

The aim of the exhibition was to establish in the Federal Republic a firm interest in the variety and uses of Irish linen, and to lay the foundation for a growing market for Irish linen products. In this respect, the exhibition as a first venture into Continental Europe, proved to be entirely successful. The opinion of participating Members of the Guild endorsed this view. The exhibition attracted a deep interest among both the retail stores in Dusseldorf, who on their own initiative put on supporting displays of linen goods, and among buyers from the Federal Republic at large. The key note of the display was quality, and in this the Irish Linen Industry was undoubtedly a strong selling point.

Irish Linen enjoys great prestige and the diversity of the Industry's products has proved both revealing and impressive to the general public. The initiative of the Irish Linen Guild in actively developing their European market in this way should provide an encouraging example to others.

BRITON WINS GERMAN AWARD

Mr. F. J. Elvy, managing director of Cimex Company of Orpington, Kent, is the first person in Britain to receive the Diesel medal, Germany's foremost award for inventiveness in industry and science. The medal, presented recently at a ceremony in Nuremberg, was awarded to Mr. Elvy for his contribution to health and hygiene in industry and hospitals. His company recently introduced a vacuum machine capable of killing all the germs which pass through it – said to be a major step forward in the war on cross infection in hospitals. Mr. Elvy is seen with the medal and certificate of honour after the presentation. Mr. Alan Green, Minister of State, Board of Trade has sent him a letter of congratulations and has also congratulated the company on their efforts in the export field.

B.T.H.A. 'Britain in Bloom Campaign'

'BRITAIN IN BLOOM' – a nation-wide campaign designed to encourage people living and working in cities, towns and villages to decorate their premises with flowering plants and shrubs – will be launched next year by the British Travel and Holidays Association. The campaign is being supported by local chambers of trade and commerce throughout the country. Trade associations, too, are actively co-operating.

'The idea of the campaign is to make Britain even more attractive to overseas visitors' said an official of the B.T.H.A. 'Floral competitions on a local and national scale will be held throughout the spring and summer. The competitions will be designed so that everyone – the man with a garden or the flat-dweller with a single window-box; the small shopkeeper or the large city business house – can enter for the awards.'

CoID Poster Design Awards

THE Council of Industrial Design in association with 16 other organizations is for the second year sponsoring a series of awards in an attempt to stimulate a high standard of design in British posters. There will be a maximum of 25 awards. Diplomas will be given to the advertiser, the advertising agency, designer and printer responsible for each award winning poster.

Entry forms can be obtained from the Council of Industrial Design, Haymarket, London, S.W.1. Entries will only be accepted between April 1 and 30, 1963.

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AND AT OFFICES AS QUOTED ASSOCIATED COMPANIES AND CORRESPONDENTS THROUGHOUT THE WORLD

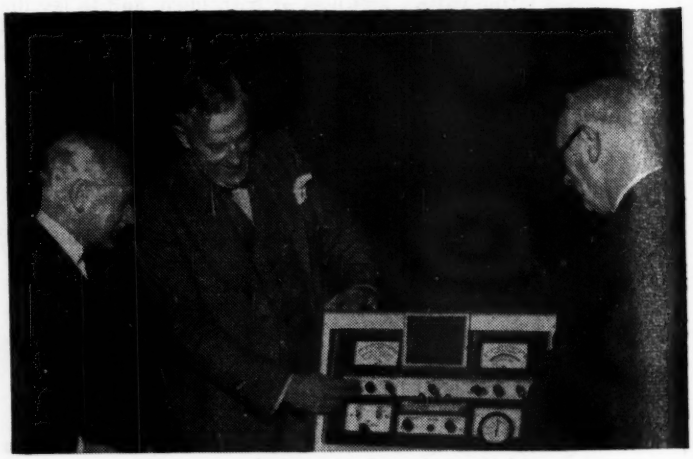
Overseas Trade Section

BRITISH AGRICULTURAL ENGINEERS VISIT TO FRANCE

At the end of October the Agricultural Engineers Association sponsored a visit to France of a party of members to study trade prospects and to examine distributor outlets particularly for the smaller manufacturer. Meetings were held with members of the F.I.M.M. (Federation des Importateurs de la Metallurgie et de la Mecanique) and visits, arranged by the Commercial Department of the British Embassy, were made to distributors and dealers in agricultural machinery in the areas of Normandy, Lyons and Strasbourg.

At a reception at the British Chamber of Commerce in Paris, the party met members of the British commercial community as well representatives of the S.G.C.T.M.A. (Syndicat General des Constructeurs de Tracteurs et Machines Agricoles). Seen at the reception are (*left to right*): Mr. G. J. Shannon, British European Airways; Mr. D. R. Young, P. J. Parmiter & Sons Ltd.; Mr. A. Birch, Commercial Counsellor, British Embassy, Paris; Air Vice-Marshal Hopps, Secretary and Chief Executive, Agricultural Engineers Association; Mr. T. Rennison, Landmaster Ltd.; Mr. H. C. Talbot, President, British Chamber of Commerce, Paris; Mr. R. H. Branston, Whitlock Bros. Ltd.; and Mr. G. A. Iles, Western Engineering (Delabole) Co. Ltd.,

Mr. H. Birtles (right), Director of Export Services Branch, Board of Trade, inspecting a new section devoted to export products of Thorn Electrical Industries Ltd., at Thorn House, London. With him are Mr. L. A. Szemere (left), Atlas Export Manager for Europe, and Mr. W. Geuken, of Firma W. Geuken, the Hague, Netherlands.



In 1961 Crypton Equipment Ltd. (M. I. Group) of Bridgewater, Somerset, exported 30 per cent. of their total production to more than 93 countries. Recently, Sir Gerald Willis, M.P. for Bridgewater, visited the factory to congratulate the firm on 'a remarkable export achievement'. The picture shows Sir Gerald (*left*), Admiral R. F. Storrs, managing director, and Mr. H. R. Armit, (*right*), deputy regional controller, South-western Region, Board of Trade, inspecting a new Crypton precision engine tester — the 'Scopemaster'.

£70,000 WORTH OF TYPEWRITERS FOR U.S.A.

To ensure pre-Christmas supplies for American dealers, 3,000 British-built portable typewriters, weighing more than 13 tons and worth nearly £70,000, were flown from London to New York by special charter aircraft. (Seen at London Airport). The machines were built at the West Bromwich works of Smith-Corona Limited, the British manufacturing unit of the American Smith-Corona Marchant organization.

Trade and Financial Arrangements

Italy and Sweden

THE ITALIAN Minister of Foreign Trade in a circular dated October 24, 1962, announce that the Trade Agreement between Italy and Sweden signed in Stockholm on December 19, 1961, not having been denounced by either party, was extended for a further twelve months from November 1, 1962.

The exchanges continued to be regulated on the basis of the dispositions laid down in the circulars of January 4, 1962, and April 12, 1962

For Italian exports to Sweden, the general export rules laid down in the Ordinary Supplement to the *Gazzetta Officiale* No. 246 of October 1, 1962, are still in force (i.e. the Italian 'negative' Export List of Goods still subject to licensing).

Spain and Morocco

A NEW trade agreement between Spain and Morocco was signed in Madrid on July 21, 1962.

The agreement is valid for one year from July 1, 1962, to June 30, 1963.

In the quota lists, the Spanish exports to Morocco include fruit, vegetables, wines, tobacco, fertilizers, pharmaceuticals, fabrics, leather goods, iron and steel products, machinery and motor cycles. The Moroccan exports to Spain comprise fruit, dried vegetables, wines, beer, cotton, phosphates, iron ore and cement.

Iraq and Pakistan

A TRADE AGREEMENT between Iraq and Pakistan was signed in Baghdad on May 12, 1962, and came into force on September 18, 1962.

Among the goods scheduled to be exported to Pakistan are dates and barley and among those scheduled to be exported to Iraq are cotton textiles.

A translated copy of the Agreement can be seen at the Export Services Branch, Board of Trade, Room E.54, Hillgate House, 35 Old Bailey, London, E.C.4.

Argentina and Sweden

AN AGREEMENT between Argentina and Sweden to avoid double taxation on income and capital was signed in Buenos Aires on September 3, 1962. This is the first agreement of this kind to be entered into by the Argentine authorities.

A translation of the agreement can be seen at Export Services Branch, Tariff Section, Board of Trade, Room E.44, Hillgate House, 35 Old Bailey, London, E.C.4.

Double Taxation Convention Extended to South West Africa

THE BOARD OF INLAND REVENUE announce that the provisions extending to South West Africa the Double Taxation Convention between the United Kingdom and the Republic of South Africa were published on November 22 as a Schedule to a draft Order in Council.

Double Taxation Convention with Israel

THE BOARD OF INLAND REVENUE announce that the Double Taxation Convention with Israel which was signed on September 26, was published on November 22, as a Schedule to a draft Order in Council.

'Hints to Business Men' Visiting Burma and Haiti

REVISED EDITIONS of the booklets on Burma and Haiti have been published in the series of 'Hints to Business Men'.

British business men who intend visiting those countries on export business can obtain copies of the booklets on application to the Directories and Notices Section, Board of Trade, Room 0348, Horse Guards Avenue, London, S.W.1. (Tel. Trafalgar 8855, Ext. 2928).

Amendments to the List of British Commercial Representatives Overseas

THE following amendments should be made to the list of British Commercial Representatives Overseas which was published in the *Board of Trade Journal* of November 16, 1962.

Liberia:

The title of the British Commercial Representative should read . . . 'First Secretary (Commercial) and Consul,'

Portugal: Lisbon

Amend 'Counseller' to 'Counsellor'.

Sierra Leone:

Amend the name of the Second Secretary (Commercial) to read 'Mr. J. L. Beaven' and the Telegraphic address to '(UKREP, Freetown)'. Tel. 3961/3966 (6 lines)).

United States: Honolulu

The address and the telephone number of the British Consulate have been changed to:

1202 First National Bank Building,
165 South King Street,
Honolulu, 13,
Hawaii. (Tel. 561-048.)

Malaya: Kuala Lumpur

The address of the United Kingdom Trade Commissioner, P.O. Box 577, Kuala Lumpur, is 1 Jalan Suleiman, not 1 Suleiman Rd., as stated.

Rwanda and Burundi

The telephone number of the British Embassy at Usumbura is Usumbura 2105.

British Commercial Representatives Overseas

THE BOARD OF TRADE also announce the following overseas staff changes:

Malaya

Mr. R. L. Sutton, until recently serving as a Principal with the Board of Trade in London, to Kuala Lumpur as British Trade Commissioner. He replaces Mr. J. N. McKelvie.

Jamaica

Mr. J. N. McKelvie to Kingston in December 1962, as British Trade Commissioner and Economic Adviser to the British High Commissioner in Jamaica. He will replace Mr. B. A. F. Pennock.

Australia

Mr. B. A. F. Pennock to Perth in January 1963, as the British Trade Commissioner in Western Australia. He will replace Mr. J. D. Leithead.

New Zealand

Mr. J. D. Leithead to Auckland in January 1963, as British Trade Commissioner. He will replace Mr. A. P. Timms who will be returning to Britain in December 1962, at the end of his tour of duty.

Marketing in Europe

'Marketing in Europe', a new marketing monthly published by the Economist Intelligence Unit, provides detailed analyses of consumer markets and retail distribution in Europe, shown against the background of the general business climate. Assessments are made of all the factors affecting consumer spending. It is written for manufacturers, wholesalers, exporters, importers, retailers and advertising agencies who may be interested in the pattern of consumer spending and in marketing prospects for individual product groups on the Continent and in the Common Market countries in particular.

Copies: The Economist Intelligence Unit, 5 Bury Street, London, S.W.1. Price, annual subscription £30, individual copies £3 10s.

EFTA Bulletin

The November issue of *EFTA Bulletin* includes articles on the United States Trade Expansion Act, 1962; the future of Europe's coal industry; and co-operation in production in industry and agriculture. Copies free from Information Dept., 10 Avenue de Bud, Geneva, Switzerland.

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41 YEARS OF DEPENDABLE SERVICE

Information for United Kingdom Exporters

BRIEF DETAILS are given below of overseas inquiries for United Kingdom products, contracts open for tender, reports on commercial conditions abroad, export trade openings, etc., issued recently by the Export Services Branch, Board of Trade, to subscribers to the *Export Service Bulletin*.

The *Bulletin*, published three times a week, with a weekly Supplement, is available to United Kingdom manufacturers and exporters at a subscription of £10 10s. a year. A subscription form can be obtained from the Export Services Branch, Board of Trade, Room E.09, Hillgate House, 35 Old Bailey, London, E.C.4. (City 5757, Ext. 420), (Telex 25977). Copies of particular *Bulletins* containing further details of the items referred to below can be obtained from the same address on prepayment of the sum of 2s. per copy.

Calls for Tender

*Inquiries connected with the calls for tender mentioned below should be addressed to the Export Services Branch, Board of Trade, Hillgate House, 35 Old Bailey, London, E.C.4. (Inquiries by telephone: City 5757, Ext. 406 and 404). Reference numbers should always be quoted. The date given is the closing date for tendering. It refers to the current year unless otherwise indicated. Tender documents are available for loan in those cases marked with an asterisk *.*

AUSTRALIA

Ceiling Fans for Department of Works, Melbourne. December 11. E.S.B. 36132/62.*
Construction of Hospital Wing for St. Helen's Methodist Hospital, Brisbane. Closing date not known. E.S.B. 36374/62.
Construction of Highway for Department of Main Roads. February 28, 1963. E.S.B. 35721/62.

Commonwealth Stores Supply and Tender Board:
Drilling Machine. January 15, 1963. E.S.B. 36306/62.*
Grinding Machines. January 15, 1963. E.S.B. 36305/62.*

Western Australian Government:
Switchgear. February 14, 1963. E.S.B. 36030/62.*
Stockinette. December 13. E.S.B. 36029/62.*

BURMA

Lift for National Housing and Town and Country Development Board. December 12. E.S.B. 35470/62/D.L.F.*
Aerial Exchange and Switchboard for Directorate General of Posts and Telegraphs. December 10. E.S.B. 35718/62.*
Vests for Police Supply Department. January 15, 1963. E.S.B. 36084/62/D.L.F.*
Bitumen for Defence Department. December 15. E.S.B. 35760/62.

Civil Stores Committee:
Emery Belts. December 17. E.S.B. 36309/62.*
Bolt (Sliding/Locking). December 17. E.S.B. 36308/62.*
Screws. December 17. E.S.B. 36307/62.*
Brushes. December 10. E.S.B. 36043/62.*
Tube Expander. December 10. E.S.B. 36044/62.*
Shovels. December 10. E.S.B. 36045/62.*
Steel Flats, Channels and Angles, December 18. E.S.B. 36068/62.*
Hinges. December 18. E.S.B. 36069/62.*
Gap-Filling and Bedding Compound. December 18. E.S.B. 36070/62.*

CANADA

Construction of a Dam for British Columbia Hydro and Power Authority. (Advance Information.) Closing date not known. E.S.B. 35273/62.*

CEYLON

Water Supply Scheme for Ministry of Health. December 11. E.S.B. 36061/62.
Galatea for Ministry of Finance. December 18. E.S.B. 35704/62.*
Bottle Stoppers for Ministry of Industries, Home and Cultural Affairs. December 17. E.S.B. 35705/62.*
Jute Hessian for National Small Industries. December 22. E.S.B. 36059/62.
Articulated Tractor/Trailer Units for Ceylon Petroleum Corporation. December 14. E.S.B. 36058/62.*

The Ceylon Transport Board:
Paper Rolls. December 26. E.S.B. 36348/62.*
Aluminium Sheets and Tread Plates. December 19. E.S.B. 36020/62.*

Posts and Telecommunications Department:
Cement Bricks. December 12. E.S.B. 36353/62.
Concrete Ducts. December 11. E.S.B. 36352/62.
Tool Carts. December 11. E.S.B. 36351/62.

CHILE

Constructional Machinery for Ministerio de Obras Publicas. December 10. E.S.B. 35717/62.*
Pharmaceutical Products for Servicio Nacional de Salud. December 12. E.S.B. 36080/62.*

COLOMBIA

Telephone Cable and Fittings for Enysressas Publicas de Pereira, Colombia. February 11, 1963. E.S.B. 35726/62.*

EGYPT

Dyestuffs for Misr Beida Dyers S.A.E. December 8. 35762/62.*
Fertilizer Plant Extension for The General Organization for Executing the Five Year Industrial Plan. March 16, 1963. E.S.B. 36368/62.*
Plugs; Slydlocks for Egyptian Railways. December 29. E.S.B. 35268/62.

EL SALVADOR

Epamin for La Proveeduria General de la Republica. (Further Information.) December 5. E.S.B. 26279/62.

ETHIOPIA

Furnishing of Airport for Ministry of Public Works and Communications. December 15. E.S.B. 35484/62.
Radio Equipment for Imperial Board of Telecommunications. December 13. E.S.B. 35716/62.*

FORMOSA

Telescopes for Central Trust of China. December 11. E.S.B. 36606/62.*

FRANCE

Supreme Headquarters, Allied Powers Europe:
Radio Frequency Cable. December 10. E.S.B. 35262/62.*
Antenna Masts. December 12. E.S.B. 35269/62.*
Telephone/Telegraph Equipment. December 13. E.S.B. 35765/62.*

GERMANY (FEDERAL REPUBLIC OF)

N.A.T.O. Infrastructure Contract:
Electrical Work for German Authorities. Apply by December 7. G.D. 2777/61(232).

GREECE

Ministry of Trade:
Weights. (Further Information.) E.S.B. 34988/62.*
Motor Cycles. (Further Information.) Tender has been cancelled. E.S.B. 32653/62.
Rubber Pipes, December 18. E.S.B. 36310/62.*
Rubber Soles and Heels. December 13. E.S.B. 35483/62.*
Aluminous Nickel-Copper Bars. (Further Information.) Closing date now December 17. E.S.B. 30588/62.*

INDIA

Dandy Rolls for Government of Kerala Stationery Department. (Further Information.) E.S.B. 35299/62.*
Construction of Berth for Government of Gujarat. (Further Information.) December 18. E.S.B. 23664/62.
Extension of Jetty for Hindustan Shipyard Ltd. January 22, 1963. E.S.B. 36088/62.
Gear Boxes for Singareni Collieries Co. Ltd. December 27. E.S.B. 35782/62.*
Switchgear (Outdoor) for The Koyna Hydro Electric Authority. (Further Information). Tender documents now received. E.S.B. 33805/62.*
Rear-End Dumpers for National Mineral Development Corporation Ltd. December 22. E.S.B. 35761/62.

(Continued on next page)

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FOR DEPENDABILITY

CONNECTING WITH A NETWORK OF RELIABLE AGENTS OVERSEAS

Information for U.K. Exporters (*Continued*)

Damodar Valley Corp., Calcutta:
Corrugated Wired Glass. January 7, 1963. E.S.B. 36052/62/D.L.F.
Transformers. January 17, 1963. E.S.B. 36323/62.

Orissa State Electricity Board:
Switchgear Control Panels. January 4, 1963. E.S.B. 36325/62.
Power Transformers. December 17. E.S.B. 36326/62.

Maharashtra State Electricity Board:
Cranes. February 15, 1963. E.S.B. 36373/62.
Power Transformers. (Further Information.) E.S.B. 35231/62.*

Hindustan Steel Ltd.:
Refractories. December 14. E.S.B. 36324/62.
Switchgear; Transformers. January 3, 1963. E.S.B. 36371/62.

India Supply Mission:
Crankshaft Grinder. January 9, 1963. E.S.B. 36375/62.
Camera and Accessories. December 27. E.S.B. 36375/62.

Punjab State Electricity Board:
Transformers; Switchgear. (Further Information.) Tender documents now received. E.S.B. 34613/62.*
Oil Clarifying Equipment; Pump. January 15, 1963. E.S.B. 36075/62.

Gujarat Electricity Board:
Meters. (Further Information.) Tender documents now received. E.S.B. 34933/62.*
Communication Equipment. (Further Information.) Tender documents now received. E.S.B. 34934/62.*

Ministry of Railways:
Steel. December 12. E.S.B. 35764/62.*
Railway Signalling Equipment. (Further Information.) Tender documents now available.

The Fertilizer Corporation of India Limited:
Cables. December 17. E.S.B. 36372/62.
Sulphur. January 10, 1963. E.S.B. 35786/62.
Steel Pipes, Fittings and Valves. January 8, 1963. E.S.B. 35785/62.

Atomic Energy Establishment, Trombay:
D.C. Relays. (Further Information.) Tender documents now received. E.S.B. 35222/62.*
Distribution Transformers. (Further Information). Tender documents now received. E.S.B. 35223/62.*
Exhaust Fan. (Further Information.) Tender documents now received. E.S.B. 35224/62.*
Vibrating Reed Electrometer. (Further Information.) Tender documents now received. E.S.B. 35225/62.*
Micro-Combustion Trains and Accessories. (Further Information.) Tender documents now received. E.S.B. 35226/62.*

National Coal Development Corp. Ltd., Ranchi:
Drilling Machines. December 22. E.S.B. 36327/62.
Transformers. January 17, 1963. E.S.B. 36331/62.*
Transformers. January 2, 1963. E.S.B. 36332/62.*
Oil Circuit Breakers. January 17, 1963. E.S.B. 36333/62.*
Circuit Breakers. January 2, 1963. E.S.B. 36334/62.*
Electrical Equipment. December 18, E.S.B. 36338/62.*
Electrical Equipment. December 18. E.S.B. 36339/62.*
Grinding Machines. December 22. E.S.B. 36328/62.
Saw Mill Machinery. December 22. E.S.B. 36329/62.
Coal Crushing Machine. December 22. E.S.B. 36330/62.
Tubular Poles. December 17. E.S.B. 36340/62.
Circuit Breakers. December 26. E.S.B. 36335/62.*
Switch Gear. January 7, 1963. E.S.B. 36336/62.*
Lightning Arrestors. January 7, 1963. E.S.B. 36337/62.*

IRAN

Motor Boats for Imperial Iranian Gendarmerie. December 29. E.S.B. 35456/62.*
Diesel Generator for Iran Sugar Corporation. December 22. E.S.B. 35791/62.*

Iranian State Railways:
Compressor. December 29. E.S.B. 35790/62.*
Caustic Potash. January 8, 1963. E.S.B. 35789/62.*

IRAQ

Construction of Antibiotic Plant for Ministry of Industry. January 10, 1963. E.S.B. 35792/62.
Foundry Equipment for Ministry of Education. February 10, 1963. E.S.B. 35796/62.
House Construction for Ministry of Agriculture. December 15. E.S.B. 35795/62.

Ministry of Defence:
Circular Saw (Trailer Mounted). (Further Information.) Tender documents now available. E.S.B. 35240/62.*
Textiles. December 17. E.S.B. 36022/62.

Government Oil Refineries Administration:
Soldering Materials. January 5, 1963. E.S.B. 36009/62.
Batteries. December 30. E.S.B. 35797/62.
Tubes for Heat Exchangers. December 22. E.S.B. 35793/62.
Tinplate. December 29. E.S.B. 36007/62.

JORDAN

Construction of Sewage System for Council of the Municipality of Amman. (Further Information.) Closing date postponed to January 31, 1963. E.S.B. 28546/62.

KENYA

Water Meters for City Council of Nairobi. December 10. E.S.B. 35261/62.*

KUWAIT

Laboratory Equipment for Ministry of Education. February 2, 1963. E.S.B. 35781/62.

Kuwait Oil Company Ltd.:
Caustic Soda. December 16. E.S.B. 35746/62.*
Manilla Rope. December 23. E.S.B. 36700/62.*

Ministry of Electricity and Water:
Miscellaneous Hardware. December 26. E.S.B. 36370/62.*
Electric Light Fittings. December 23. E.S.B. 36369/62.*
Paints; Creosote. December 16. E.S.B. 35754/62.*
Electric Light Fittings. December 12. E.S.B. 35747/62.*

LEBANON

Machinery and Equipment for Pharmaceutical Plant for Middle East Pharmaceutical and Industrial Company. Closing date not known. E.S.B. 36079/62 D.L.F.

MALAYA

Water Treatment Plant Equipment for Public Works Department, Johore. December 29. E.S.B. 36085/62.

NEW ZEALAND

General Post Office, Wellington:
Khaki Drill. January 16, 1963. E.S.B. 36343/62.*
Power Relays. January 16, 1963. E.S.B. 36347/62.*
Motor-Drills and Breakers. January 16, 1963. E.S.B. 36346/62.*

PAKISTAN

Motor Vessels for East Pakistan Inland Water Transport Authority, Dacca. December 31. E.S.B. 35775/62.*
Non-Lifting Injectors for Pakistan Western Railway. December 19. E.S.B. 36360/62.*
Junction Boxes for Pakistan Telegraph and Telephone Department. December 22. E.S.B. 36008/62.
Construction of a Suspended Gas Pipeline for West Pakistan Industrial Development Corporation. December 10. E.S.B. 36083/62.

Directorate of Supply:
Vehicles. December 10. E.S.B. 35769/62.*
Vehicles. December 10. E.S.B. 35770/62.*
Laboratory Equipment (Optical). November 27. E.S.B. 35741/62.*

Pakistan Eastern Railway:
Air Compressor. January 2, 1963. E.S.B. 36321/62.*
Pig Iron and Steel Products. December 27. E.S.B. 36322/62.*
Solid Steel Wheels. December 26. E.S.B. 36304/62.*
Buffer Plungers and Spindles. December 26. E.S.B. 36303/62.

PERU

Tank Cars for the Peruvian Corporation Ltd. December 17. E.S.B. 36082/62.

PORTUGUESE EAST AFRICA

Tin Prospecting Rights for Ministry of Overseas. January 15, 1963. E.S.B. 36024/62.

Ports, Railways and Transport Department:
Electric Material. December 12. E.S.B. 35291/62.
Screws, Rivets and Pieces. December 12. E.S.B. 35286/62.
Truck Spares. December 28. E.S.B. 35287/62.
Aeroplane Spares. December 28. E.S.B. 35290/62.
Diesel Locomotive Spares. December 27. E.S.B. 35292/62.
Fish Plates. December 10. E.S.B. 36025/62.

PORTUGUESE WEST AFRICA

Tyres and Inner Tubes for Ports, Railways and Transport Department. December 14 E.S.B. 36342/62.

RHODESIA AND NYASALAND

Chlorinator for The Salisbury City Engineer's Department. December 18. E.S.B. 36031/62.*

SINGAPORE

City Council of Singapore:
Stay Rods and Lead Sheets and Strips. December 11. E.S.B. 36315/62.
Chain Hoist. December 11. E.S.B. 36316/62
Fuse Boxes. December 11. E.S.B. 36314/62.
Cable. December 11. E.S.B. 35463/62.*
Power Station Equipment. December 14. E.S.B. 36377/62.

SOUTH AFRICA

Bore Hole Casing for South West Africa Administration. December 18. E.S.B. 36366/62.*
Vehicles for Department of Transport, Pretoria. (Further Information.) Tender documents now received. E.S.B. 35473/62.*

South African Railways:
Brake Blocks. Closing date postponed to December 19. E.S.B. 31854/62.*
Packings and Jointings for Motor Vehicles. Apply by January 9, 1963. E.S.B. 36154/62.
Electrification of Points and Signals. Closing date postponed to February 1, 1963. E.S.B. 32282/62.*
Fork Lift Trucks. December 21. E.S.B. 36100/62.*
Motor Vehicle Chassis. December 21. E.S.B. 36099/62.*

Cape Provincial Administration:
Vibrating Rollers. December 21. E.S.B. 36318/62.*
Vibrating Rollers. December 21. E.S.B. 36319/62.*
Grid Type Rollers. December 21. E.S.B. 36320/62.*
Hand and Garden Tools. December 18. E.S.B. 36367/62.*
Scientific Apparatus. December 14. E.S.B. 36051/62.*

State Tender Board, Pretoria:
Steel Trays with Bowls. December 10. E.S.B. 36055/62.*
Bark Corks. December 11. E.S.B. 36056/62.*
Cable Carriers. December 12. E.S.B. 36039/62.*
Caravans. December 12. E.S.B. 36036/62.*
Saw and Filing Machine. December 12. E.S.B. 36033/62.*
Decade Dividers. December 12. E.S.B. 36037/62.*
Clamps and Hoses for Pneumatic Tools; Clay Diggers. December 12. E.S.B. 36038/62.*
Steel Staples. December 12. E.S.B. 36041/62.*
Portable Huts. December 12. E.S.B. 36035/62.*
Air Compressors. December 12. E.S.B. 36034/62.*
Plumbers Metal. December 12. E.S.B. 36042/62.*
Terminating Clamps. December 12. E.S.B. 36040/62.*
Transformers. December 10. E.S.B. 36054/62.*
Test Instruments. December 11. E.S.B. 36057/62.*

(*Continued on page* 1128)

NORWAY BUYS — *who sells?*

In 1960 eight times as much money was spent in Norway on electrical home appliances as in 1950. During this decade, 1950—60, a new washing machine and a new refrigerator came into almost every second Norwegian home. Norway's 3.6 million people bought — and are buying — far more articles like these than are many countries with five or even ten times the population.

How is Britain doing in this expanding market? Not more than fairly well. Not nearly as well as Western Germany, for instance, with 19.5% of Norway's imports in 1960, not quite so well as Sweden with 15.9%. Britain's share was 15%, amounting to £71 million. It is still a big figure, bigger than Britain's exports to many countries with far larger populations. Total imports in 1959 worked out at £497 per family, of which £75 went on British goods, a shade more on Swedish, and £96 on goods from Western Germany.

In almost every category of goods Britain is competing in the Norwegian market with its two biggest supplier countries — Germany and Sweden. But there are others too. The U.K. is in competition with U.S.A. for the sale of fuels and tobacco; Denmark for clothing, machinery and sugar, the Netherlands for textile yarns and fabrics, France for cars and chemicals.

With its relatively low tariffs Norway is a highly competitive market. It is fatal to rely on sentiment to sell your goods, but it is more than foolish to ignore it. In Norway of all European countries, the soil is favourable to Britain. But it must be cultivated by all arts of marketing and advertising.

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For further marketing and advertising information on Norway consult our exclusive British representatives

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Information for U.K. Exporters (*Continued*)

SOUTH VIETNAM

Central Purchasing Authority:
Sports Equipment. December 19. E.S.B. 36345/62.*
Tyres and Tubes. December 12. E.S.B. 35701/62/D.L.F.*

SPAIN

Shovels and Cranes for Ministry of Public Works. Closing date postponed to January 10, 1963. E.S.B. 33250/62.

SUDAN

Paper for Government Printing Press. Closing dates from December 11 to December 22. E.S.B. 35738/62.*
Cable and Accessories for Central Electricity and Water Administration. December 10. E.S.B. 35737/62.*
Petrol; Lubricating Oils and Greases for Department of Mechanical Transport. December 15. E.S.B. 35497/62.

Sudan Railways:
Metal-Working Machinery. December 13. E.S.B. 35727/62.
Lathe. December 20. E.S.B. 35730/62.
Overhead Crane. January 7, 1963. E.S.B. 35731/62.
Drilling Machine. January 10, 1963. E.S.B. 35733/62.
Lathe. December 18. E.S.B. 35728/62.
Milling Machine. December 19. E.S.B. 35729/62.*
Lathe. December 17. E.S.B. 35735/62.

SYRIA

Cast Iron Pipes for Damascus Water Administration. December 18. E.S.B. 36361/62.

THAILAND

Aluminium Foil for Thailand Tobacco Monopoly. December 12. E.S.B. 36003/62.
Meters for Metropolitan Electricity Authority. December 28. E.S.B. 36001/62/D.L.F.*
Copper Ingots for the Treasury Department. December 17. E.S.B. 36010/62.
Shaping Machine for the Royal Irrigation Department. December 11. E.S.B. 36016/62.
Cable for the Telephone Organisation of Thailand. December 14. E.S.B. 36013/62.*

TRINIDAD AND TOBAGO

Trinidad and Tobago Electricity Commission:
Distribution Transformers. January 7, 1963. E.S.B. 36072/62.*
Distribution Transformers. January 7, 1963. E.S.B. 36073/62.*

TUNISIA

Rayon Weaving Plant for Office National du Textile. December 10. E.S.B. 35442/62.*

TURKEY

Lighting Cable Installation Work for Ministry of Public Works. December 15. E.S.B. 36096/62.
Grinding Stones for State Railways Administration. December 10. E.S.B. 36344/62.*

NATO Infrastructure Contract:
Furnishing and replacing of underground screened neoprene lighting cable for the Turkish Authorities. Apply by December 15. G.D. 157/60(47).

UNITED STATES OF AMERICA

Hydraulic Turbines for United States Army Corps of Engineers, Portland. December 27. E.S.B. 36076/62.*

URUGUAY

Radio Telephone and Tele-Type Network for El Banco de la Republica Oriental de Uruguay. January 14, 1963. (In Spanish.) E.S.B. 36364/62.*
Telecommunications Equipment for El Servicio Oficial de Difusion Radioelectrica. December 12. E.S.B. 36363/62.*
Engineering Consultancy Services for U.T.E. Thermal Plant. February 5, 1963. E.S.B. 35260/62.*

Agency and Export Opportunities, Market Surveys, Etc.

Further details of the items referred to below are contained in recent issues of the Export Service Bulletin, or Supplement, copies of which can be obtained from the Export Services Branch, Board of Trade, Hillgate House, 35 Old Bailey, London, E.C.4 (inquiries by telephone City 5757, Ext. 427), on prepayment of the sum of 2s. per copy. The reference number should be quoted in all inquiries.

All Countries
Successful bidders for overseas contracts. (E.S.B. 6499/62.)

Argentina
Economic report – July-September 1962. (C.R.E. 4850/61.)

Australia
Inquiry for department store goods; china; glass; foodstuffs. (E.S.B. 35193/62.)
Development projects in South Australia. (E.S.B. 35141/62.)

Bolivia
Inquiry in respect of tyre and rubber factory; rubber washing plant, machinery; construction materials; cafeteria equipment; medical supplies; office equipment. (E.S.B. 34260/62.)

Canada
Agency inquiry for stapling and strapping machines. (E.S.B. 35084/62.)
Inquiry for cough and cold lozenges. (E.S.B. 35523/62.)
Inquiry for steel rings and links for scallop dragging. (E.S.B. 35830/62.)
Inquiry for theatre equipment; cinema projection equipment. (E.S.B. 35922/62.)
Manufacture under licence – machinery and equipment. (E.S.B. 11906/62.)
Market report on laundry and dry cleaning machinery. (E.S.B. 30172/62.)
Federal Government Contracts. (E.S.B. 2676/62.)

China
Economic report, September 1962. (C.R.E. 492/62.)

Congo Republic (Leopoldville)
Market report on textiles. (E.S.B. 31644/62.)
Economic report, October 1962. (C.R.E. 3476/G.)

Denmark
Market report on refractories. (E.S.B. 34016/62.)

Ethiopia
Inquiry for grass cutting machines. (E.S.B. 35549/62.)

Fiji
Agency inquiry for piece-goods; shawls; blankets. (E.S.B. 18937/62.)

Finland
Agency inquiry for textiles; men's hats. (E.S.B. 35502/62.)

France
Agency inquiry for furniture. (E.S.B. 35187/62.)
Agency inquiry for wool. (E.S.B. 35399/62.)
Economic report – September 1962. (C.R.E. 4694/62.)

Germany (Federal Republic of)
Agency inquiry for piece-goods. (E.S.B. 35185/62.)
Agency inquiry for textiles; yarns. (E.S.B. 33476/62.)
Agency inquiry for woollen yarns. (E.S.B. 35133/62.)
Inquiry for confectionery; biscuits. (E.S.B. 35947/62.)
Economic report – November 12-18, 1962. (C.R.E. 1479/G.)
Import Committee Publication, July 5, 1962 – fruit and fruit juices. (C.R.E. 158/62.)

Greece/France
Trade agreement. (C.R.E. 4811/G.)

Honduras Republic
Agency inquiry for glass containers; hand tools; battery making machinery; machinery for making rubber soles and heels; vehicle accessories. (E.S.B. 35040/62.)

Hong Kong
Agency inquiry for electric motors; drilling machines. (E.S.B. 35957/62.)
Agency inquiry for woollen and worsted piece-goods; linings; department store goods. (E.S.B. 34256/62.)

India
Inquiry for foundry plant. (E.S.B. 35530/62.)
Inquiry for machinery and plant. (E.S.B. 35376/62.)
Inquiry for machinery and plant; electrical and electronic equipment. (E.S.B. 35378/62.)

Iran
Agency inquiry for yarns; textile machinery, etc. (further information). (E.S.B. 32591/62.)

Iraq
Economic report – August-September 1962. (C.R.E. 1802/62.)

Israel
Agency inquiry for surgical instruments; laboratory and medical instruments; pharmaceutical raw materials. (E.S.B. 35898/62.)
Economic report – October 1962. (C.R.E. 3000/G3.)

Italy
Manufacture under licence – electric fans. (E.S.B. 35110/62.)
Market report on ready-made clothing. (E.S.B. 29847/62.)

Italy/Switzerland
Trade agreement. (C.R.E. 4006/G.)

Jamaica
Agency inquiry for electrical accessories. (E.S.B. 35638/62.)

Kenya
Agency inquiry for hoists. (E.S.B. 35824/62.)
Agency inquiry for knitwear; women's clothing; fents; mail order house. (E.S.B. 35583/62.)
Agency inquiry for suitings. (E.S.B. 35394/62.)

Libya
Inquiry for domestic fancy goods. (E.S.B. 35116/62.)

Mexico
Inquiry for foundry plant and equipment (further information). (E.S.B. 26464/62.)
Visit of the market officer, Mexico City, to Guadalajara, State of Jalisco. (C.R.E. 10675/59.)

Netherlands
Agency inquiry for compressors. (E.S.B. 35506/62.)

New Zealand
Agency inquiry for electric motors; conduit fittings. (E.S.B. 36205/62.)

Nicaragua
Market report on domestic refrigerators. (E.S.B. 32593/62.)

Nigeria
Market report on domestic, commercial and industrial light fittings. (E.S.B. 32825/62.)

Information for U.K. Exporters (*Continued*)

Pakistan
Inquiry for sanitary ware and fittings; air conditioning equipment; electrical fittings; builders materials. (E.S.B. 33569/62.)

Paraguay
Agency inquiry for motor cycles; bicycles; fertilizers. (E.S.B. 35810/62.)

Philippines
Agency inquiry for electric generators; machinery. (E.S.B. 35662/62.)

Portugal
Economic report – October 1962. (C.R.E. 5765/61.)

Roumania
Inquiry for weigh bridges and balances; machinery and plant. (E.S.B. 35683/62.)

Singapore
Industrial development plans. (E.S.B. 13700/62.)

South Africa
Agency inquiry for cotton piece goods. (E.S.B. 35813/62.)
Manufacture under licence – toilet preparations. (E.S.B. 35806/62.)

South Vietnam
Economic report – July-September 1962. (C.R.E. 3991/60.)

Soviet Union
Economic report – July-September 1962. (C.R.E. 1343/60.)

Spain
Agency inquiry for builders equipment and hardware; tubes and fittings; tools. (E.S.B. 31098/62.)
Inquiry for ammonia cracking plant. (E.S.B. 34520/62.)
Inquiry for parking meters. (E.S.B. 35389/62.)

Spain/Morocco
Trade agreement. (C.R.E. 7865/57.)

Sudan
Inquiry for lime burning plant and equipment. (E.S.B. 35132/62.)

Sweden
Agency inquiry for linings for leather goods. (E.S.B. 35359/62.)
Agency inquiry for sheepskins (further information). (E.S.B. 31684/62.)
Agency inquiry for woollen piece goods. (E.S.B. 35190/62.)
Agency inquiry for machinery and equipment for food industries; brewery equipment. (E.S.B. 35650/62.)
Agency inquiry for chemicals and pigments. (E.S.B. 35871/62.)
Agency inquiry for educational materials; modelling compounds. (E.S.B. 35846/62.)
Inquiry for chemicals; fertilizers. (E.S.B. 35563/62.)
Inquiry for chemicals; foodstuffs. (E.S.B. 35938/62.)
Inquiry for expansion joints and valves. (E.S.B. 35316/62.)
Inquiry for materials for making welding electrodes; abrasives. (E.S.B. 35677/62.)

Switzerland
Agency inquiry for suitings. (E.S.B. 35969/62.)
Agency inquiry for stock breeders equipment; caravan trailers; mobile toilets. (E.S.B. 34795/62.)

Syria
Inquiry for yarns. (E.S.B. 35504/62.)

Thailand
Economic report – October 1962. (C.R.E. 2653/60.)

Turkey
Inquiry for agricultural and earth moving machinery components and spares; tractor spares. (E.S.B. 33507/62.)
Inquiry for generators; electrical score boards; ski lift installations. (E.S.B. 35589/62.)

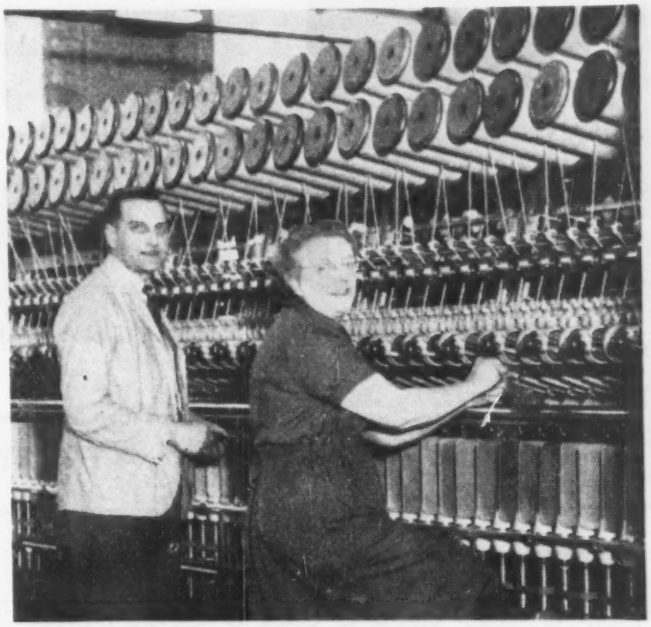
Uganda
Inquiry for second-hand clothing. (E.S.B. 35078/62.)

United States of America
Inquiry for fishing reels. (E.S.B. 35855/62.)
Inquiry for footwear. (E.S.B. 36193/62.)
Inquiry for marine diesel engines. (E.S.B. 35628/62.)
Inquiry for souvenirs; novelties. (E.S.B. 35128/62.)
Manufacture under licence – de-icing units for aircraft. (E.S.B. 33176/62.)
Trade shows in the Chicago area to be visited by an officer of the British Consulate-General in Chicago. (E.S.B. 35425/60.)

Various countries
Legislation governing the termination of agency agreements in overseas countries. (E.S.B. 441/G.)

Venezuela
Economic report – July-September 1962. (C.R.E. 2475/2G.)

EXPORTED TO 25 COUNTRIES



This worsted type spinning frame known as the Megaflex/A.S.D. spinning frame, manufactured by Prince-Smith & Stells Ltd., Keighley, Yorks, has been exported to 25 overseas countries. The total number of spindles involved is about 161,000. A similar machine, featured in the *Board of Trade Journal* of October 19, page 792, was supplied to Les Fils Habib Badaro of Beirut by the same firm and not by Wildt Mellor Bromley Ltd., as stated. Badaro produces worsted not woollen yarn as stated.

Inventions for Industry

The October issue of the 'NRDC Bulletin', a review of inventions for industry, is now available free from the National Research Development Corporation, 1 Tilney Street, London, W.1.

No. 2 of a series

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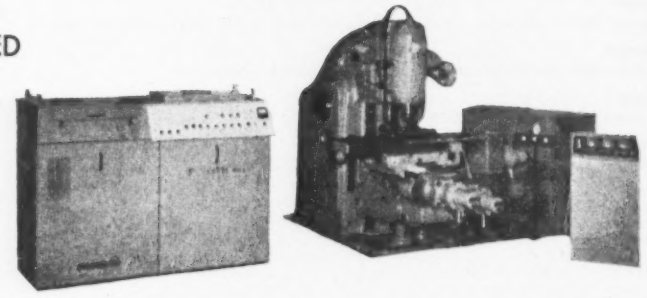

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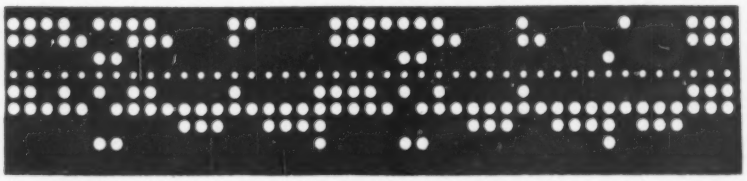

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Tariff, Customs, Import and Other Regulations in Overseas Countries

Registered Trade Mark (rtm) Goods in Overseas Tariff Lists

THE LISTS OF TARIFF, Customs and import regulation changes in overseas countries published in this section of the Journal sometimes contain words which are registered trade marks in the United Kingdom. So far as is practicable, all lists of goods are checked before publication from this point of view.

Items which fall into this category will now be prefixed by the letters 'r t m'. Readers of the Journal should note that this prefix signifies that the words are registered as trade marks in the United Kingdom, but that in the present context they are assumed to refer generally to products of the description stated in brackets.

While every attempt will be made to ensure that the scrutiny is complete, the lists may contain other words which are registered as trade marks in the United Kingdom or in other countries but which it has not been possible to identify.

JAPAN

Correction to 'Sensitive Items' List

IN THE list of 'Sensitive Items' in connection with the Anglo-Japanese Commercial Treaty published in the *Board of Trade Journal* of November 23, the heading 'Items under United Kingdom Import Control' should have preceded all the items listed on pages 1054-5, beginning with 'Cigarette Lighters (other than those of precious metals) and parts.'

For the convenience of traders the whole of this section is reprinted from pages 1054-5 of last week's issue.

Items under United Kingdom Import Control

Item	Quotas			Liberalization Date	BTN Number	Definition
	1963 (Annual rate)	1964	1965			
Cigarette lighters (other than those of precious metals) and parts	£30,000	£40,000		January 1, 1965	ex 98.10	Mechanical lighters and similar cigarette lighters, including chemical and electrical lighters and parts thereof, but not including those of precious metal.
Knives, forks and spoons and parts thereof, containing iron or steel	£50,000	£100,000	£160,000	January 1, 1966	ex 82.09	Knives with cutting blades, serrated or not (including pruning knives) containing iron or steel, other than knives falling within heading 82.06.
					ex 82.10	Knife blades containing iron or steel.
					ex 82.14	Spoons, forks, fish eaters, butter knives, ladles and similar kitchen or tableware, containing iron or steel.
					ex 82.15	Handles of iron or steel for articles falling within heading 82.09 or 82.14.
Domestic sewing machines and parts (1)	£350,000	£600,000		January 1, 1965	ex 84.41	Domestic sewing machines and parts, excluding needles and sewing machine cases.
Fishing tackle (excluding fish-hooks of metal and fishing reels of wood or metal)	£50,000	£100,000		January 1, 1965	ex 97.07	Line fishing rods and tackle (but not fish-hooks of metal or fishing reels of wood or metal); fish landing nets and butterfly nets.
Binoculars and parts (1)	£100,000	£200,000		January 1, 1965	ex 90.05	Refracting telescopes (binocular) prismatic or not and parts thereof.
					ex 90.02	Lenses, prisms, mirrors and other optical elements of any material, mounted, being parts of or fittings for refracting telescopes (binocular) prismatic or not.
Microscopes and parts (1):						
(a) Capable of a total magnification × 1,000 and above	£60,000			January 1, 1964	ex 90.12	Compound optical microscopes, whether or not provided with means for photographing or projecting the image (excluding micro-manipulators) and parts thereof.
(b) Other		£80,000		January 1, 1965	ex 90.02	Lenses, prisms, mirrors and other optical elements of any material, mounted, being parts of compound optical microscopes.
Toys and games and parts thereof (excluding ceramic toys and parts thereof and toys made wholly of celluloid, rubber or glass):					97.10	Wheeled toys designed to be ridden by children (e.g. toy bicycles, tricycles and model motor cars); dolls' prams and dolls' pushchairs.
					ex 97.02	Dolls (except those made wholly of celluloid, rubber or glass)
(a) Metallic toys costing less than $3 f.o.b. per piece	£500,000	£700,000	£1,000,000	January 1, 1968	ex 97.03	Other toys: working models of a kind used for recreational purposes (but not including toy motors (except those made wholly of celluloid rubber or glass)).
(b) Plastic toys	£200,000	£250,000	£275,000	January 1, 1965		
(c) Others				January 1, 1966	ex 97.04	Equipment for parlour table and funfair games for adults or children (including billiard tables and table-tennis requisites) other than coin or disc operated machines.
Domestic pottery (except articles of traditional Japanese design); and ceramic toys and parts thereof:				January 1, 1968		
					ex 97.02	Ceramic dolls and ceramic parts of dolls.
					ex 97.03	Other toys and parts of ceramics; working models and parts of a kind suitable for recreational purposes, of ceramics.
(a) Ceramic toys and parts thereof	£50,000	£75,000	£100,000			
(b) Other	£200,000	£250,000	£300,000		ex 69.11	Tableware and other articles of a kind commonly used for domestic or toilet purposes of porcelain or china (including biscuit porcelain and parian) not including articles of traditional Japanese design.
Note: The pottery items will come under voluntary export control when import control ends on Jan. 1, 1968.					ex 69.12	Tableware and other articles of a kind commonly used for domestic or toilet purposes of other kinds of pottery not including articles of traditional Japanese design.
					ex 69.13	Statuettes and other ornaments, articles of furniture not including articles of traditional Japanese design.
					ex 69.14	Other articles not including articles of traditional Japanese design.

Note: (1) Open Individual Licences will be granted for the import of parts of these goods for manufacture but not for re-sale.

Japanese Commercial Treaty Photograph

THE caption of the photograph on page 1047 of last week's issue of the *Board of Trade Journal* incorrectly referred to Mr. Hayato Ikeda, Prime Minister of Japan, signing the Anglo-Japanese Commercial Treaty. The illustration in fact showed H.E. Mr. Katsumi Ohno, the Japanese Ambassador to Britain, signing the Treaty.

AUSTRALIA

Details of Tariff Changes

DETAILS are given below of the changes made in Australian Customs duties which came into effect on November 16, 1962. Deletions from and additions to the Customs Tariff are shown by square brackets and italics respectively.

Tariff Item	Goods	Former Duties: British Preferential	Former Duties: Most-Favoured-Nation	Former Duties: General	New Duties: British Preferential	New Duties: Most-Favoured-Nation	New Duties: General
43	[Coffee and chicory:						
	(A) Raw and kiln dried:						
	(1) Coffee . . . . . per lb.	3d.	3d.	4d.	No change (Under new item 43 (A) (1))		
	(2) Chicory . . . . . per lb.	4d.	4d.	4d.	No change (Under new Item 43 (C) (1))		
	AND, IN ADDITION, a TEMPORARY DUTY of . . . . . per lb.	1½d.	1½d.	1½d.			
	Provided that, in respect of such goods in direct transit to Australia on July 23, 1962, which are entered for home consumption on arrival, no additional temporary duty shall be payable.						
	(B) (1) Coffee, roasted or ground; coffee in liquid form; coffee mixed with any substance other than chicory . . . . . per lb.	6d.	6d.	7d.	9d. (Under new Items 43 (A) (2) and (B) (2))	9d.	9d.
	(2) Chicory, other than raw or kiln dried; preparations containing chicory . per lb.	7d.	7d.	7d.	7d. (Under new Items 43 (C) (2))	7d.	7d.
	(C) Substitutes . . . . . per lb.	7d.	7d.	7d.	No change (Under new Item 43 (C) (2))		
	Coffee, chicory and other coffee substitutes:						
	(A) Coffee whether or not roasted or freed of caffeine and coffee substitutes containing coffee in any proportion, not covered by sub-item (B):						
	(1) Raw coffee, including such coffee which has merely been kiln dried . per lb.	No change (Under new item 43 (A) (1))			3d.	3d.	4d.
	(2) Other . . . . . per lb.	6d. (Under former Item 43 (B) (1))	6d.	7d.	9d.	9d.	9d.
	per lb.	7d. (Under former Item 43 (B) (2))	7d.	7d.			
	(B) Extracts, essences or concentrates, of coffee, or of coffee and coffee substitutes; preparations with a basis of those extracts, essences or concentrates:						
	(1) Dry . . . . . per lb.	1s. 6d. or 1s. 9d.	1s. 6d. or 1s. 9d.	1s. 9d.	5s. 3d.	5s. 3d.	6s. 0d.
	per lb.	*(By Substitute Notice No. 1)					
	(2) Other . . . . . per lb.	6d. (Under former Item 43 (B) (1))	6d.	7d.	9d.	9d.	9d.
	per lb.	7d. (Under former Item 43 (B) (2))	7d.	7d.			
	(C) (1) Chicory roots, fresh or dried, whole or cut, unroasted . . . . . per lb.	No change (Under former Item 43 (A) (2))			4d.	4d.	4d.
	And, in addition, a Temporary Duty of . . . . . per lb.				1½d.	1½d.	1½d.
	(2) Roasted chicory; roasted coffee substitutes, n.e.i.; extracts, essences or concentrates, of roasted chicory, or of roasted coffee substitutes, n.e.i. . . . . per lb.	No change (Under former Items 43 (B) (2) and (C))			7d.	7d.	7d.
	per lb.	6d. (Under former Item 43 (B) (1))	6d.	7d.			

Note: Specific notes are quoted in Australian currency: £A125 = £ *Sterling* 100. * *See amendment to Substitute Notice No. 1 below.*

Revision of Customs By-laws

THE AUSTRALIAN Department of Customs and Excise have announced changes in the By-laws shown below:

New By-laws

The undermentioned goods will be admitted under the following tariff items until further notice:

Goods	Classification and Duty under the British Preferential Tariff: Tariff Item	Rate of Duty
BEARINGS roller, spherical, self-aligning	449 (A) (1)	Free

Decisions on Tariff Classifications

THE AUSTRALIAN Department of Customs and Excise have announced the following decisions on the application of the Australian Tariff:

BREATHING TUBES (snorkels) as used by underwater swimmers	310 (A) (2)	17½% *ad val.*
CAKE, oil and other residues (except dregs) resulting from the extraction of vegetable oils .	68	Free
NOTE: The scope of Item 68 is not to be extended to soya bean powder, grits, flour or meal lumps and the like remaining after the extraction of soya bean oil by solvent extraction when such residues have been treated *in any way* subsequent to the extraction of the oil.		
All such residues which have been subject to any further treatment such as steaming to remove either the natural bitter flavour or the solvent residues, or both, are to be classified under Item 58 (D).		
MASKS:		
Face, swimmers'	310 (A) (2)	17½% *ad val.*

Substitute Notice

THE AUSTRALIAN Customs and Excise Substitute Notice No. 1 (published in full in the *Board of Trade Journal* on January 12, 1962, page 82) is amended by Substitute Notice No. 18 as follows:

Substitute Notice No. 18

Substitute Notice No. 1 is amended by deleting from the first and second columns the goods as shown below:

First Column (Substitute)	Second Column (Durable Goods for which Goods in First Column are Substitutes)
By deleting: Instant, soluble and other concentrated powdered coffee or coffee extracts	By deleting: Three times the same quantity by weight of ground coffee.

Tariff Board Inquiry

AS ANNOUNCED in last week's issue of the *Board of Trade Journal* (page 1084) the Australian Minister for Trade has referred to the Tariff Board for inquiry and report the question whether **Engravers' zinc sheets** (Tariff Item 146(A)), should be gazetted under Section 7 of the Customs Tariff (Dumping and Subsidies) Act, 1961.

Section 7 of this Act provides that, when it is proved that goods that are produced or manufactured outside Australia and have been or are being exported to Australia have been, are being or may be sold to a person in Australia at an export price that is less than the normal value of the goods at the date of exportation, and that the importation of those goods is causing or threatening injury to an Australian industry producing or manufacturing like or directly competitive goods or may hinder the establishment of an Australian industry in connection with the production or manufacture of like or directly competitive goods, dumping duty may be imposed of a sum which represents the

Australia (*Continued*)

difference between the *normal value* of the goods at the time of shipment and the export price.

The normal value, in relation to goods that have been or are being exported to Australia, means whichever of the following amounts, as ascertained by the Minister expressed in Australian currency, is determined by the Minister to be the normal value of those goods.

(a) an amount equal to the fair market value of like goods sold in the country of export for home consumption in the ordinary course of trade plus free on board charges paid or payable in that country in respect of the goods, but not including any duties or other taxes paid or payable in that country in respect of the goods, being duties or taxes that are remitted or refunded on export.

(b) an amount equal to the highest comparable price paid for like goods sold in the country of export for export to a third country in the ordinary course of trade plus free on board charges paid or payable in the country of export in respect of the goods, but not including any duties or other taxes paid or payable in the country of export in respect of the goods, being duties or taxes that are remitted or refunded on export.

(c) an amount equal to the fair market value of like goods produced or manufactured, and sold, in a third country selected by the Minister, being a country in which, in the opinion of the Minister, the costs of production or manufacture are similar to those in the country of export, in the ordinary course of trade for home consumption in that third country plus such amount as is estimated by the Minister to be the cost of placing the goods free on board in the country of export, but not including any duties or other taxes paid or payable in the third country in respect of the goods, being duties or taxes that are remitted or refunded on export, or

(d) an amount equal to the sum of:

(i) the cost of production or manufacture of the goods or, if the Minister is of opinion that adequate information as to the cost of production or manufacture of the goods cannot be obtained, such amount as is estimated by the Minister to be the cost of production or manufacture of the goods;

(ii) free on board charges paid or payable in the country of export in respect of the goods; and

(iii) such additional amount in respect of selling costs and profit as is determined by the Minister.

This matter has been reported by telegraph by the British Senior Trade Commissioner at Canberra, who has been asked by the Australian authorities to notify them at the earliest possible date if any United Kingdom interests propose to tender evidence. In accordance with normal procedure, notification in this instance should be given to the Australian authorities **not later than December 12, 1962.** Before this date, therefore, United Kingdom Trade Associations or firms intending to submit evidence to the Tariff Board should so advise the Commercial Relations and Exports Department, Board of Trade, Horse Guards Avenue, London, S.W.1, quoting reference No. C.R.E. 13139/61.

NEW ZEALAND

Customs Tariff Inquiry

THE UNITED KINGDOM Senior Trade Commissioner at Wellington has reported by telegraph that the New Zealand Tariff and Development Board has announced that it proposes to inquire into and report on the rates of import duty which should be imposed on Item 899.520.1 – cuff links, blanks and parts of such articles. (The present duties on this item are British Preferential – Free, Most Favoured Nation – 20 per cent., General – 40 per cent).

The inquiry will take place on February 12, 1963, and statements of evidence compiled in accordance with 'Notes for the Guidance of Witnesses' must be lodged with Mr. N. V. Farrant, Secretary, Tariff and Development Board, P.O. Box 5070, Wellington, New Zealand, not later than January 29, 1963. A copy of the 'Notes for the Guidance of Witnesses' can be seen at Room E.54, Board of Trade, Hillgate House, 35 Old Bailey, London, E.C.4. (Tel. City 5757, Ext. 468).

Trade associations thought to be interested in the above inquiry have been informed and it is suggested that any British firm wishing to give evidence should get in touch with its association. Firms proposing to give independent evidence through their agents in New Zealand and wanting further information should approach the Commercial Relations and Export Department, Board of Trade, Horse Guards Avenue, London, S.W.1 (Tel. Trafalgar 8855, Ext. 2611), quoting Reference C.R.E. 13273/62).

INDONESIA

Import and Foreign Exchange Control Regulations

DETAILS were published in the *Board of Trade Journal* on May 25, page 1180, of some changes in the Indonesian import and foreign exchange regulations including the introduction of the SIVA system. Further changes were announced at the beginning of October and in view of the complexity of the regulations a brief summary is given below:

1. Imports are controlled by import licence and by exchange allocations but only established importers recognized by the Foreign Trade Department are allowed to import.

2. Imports are divided into five classes:

I. Essential goods
II. Semi-essential goods
III. Luxury goods
VI. Very luxurious goods
V. Other goods

3. The regulations affecting these classes are as follows:

(i) *Group I – Essential goods*

Foreign exchange is allocated for the import of goods in this group. They are generally subject to a price component levy of 1 rupiah per foreign exchange rupiah; exceptions are rice, fertilizers, raw cotton and goods which are directly used in the production of export goods, as determined by the Minister of Trade.

In addition, SIVA exchange may be used to pay for imports; in this case, the goods also require a special permit from the Department of Trade but are exempt from payment of the price component levy.

(ii) *Group II – Semi-essential goods*

Foreign exchange is allocated for the import of goods in this group. They are subject to a price component levy of 5 rupiahs per foreign exchange rupiah.

In addition, SIVA exchange may be used to pay for imports; in this case, they are exempt from payment of the price component levy.

(iii) *Group III – Luxury goods*

SIVA exchange only may be used for the import of goods in this group. Some of them also require a special permit from the Department of Trade.

Imports are subject to a SIVA retribution levy of 1 rupiah per foreign exchange rupiah.

(iv) *Group IV – Very luxurious goods*

SIVA exchange only may be used for the import of goods in this group. Some of them require a special permit from the Department of Trade.

Imports are subject to a SIVA retribution levy of 6 rupiahs per foreign exchange rupiah.

(v) *Group V – Other goods*

The import of goods in this group is restricted and a permit from the Department of Trade is required.

Note : *Price Component*. The price component levies are related to the foreign exchange rupiah; this is the rupiah equivalent of the approved foreign exchange, calculated on the c. and f. value.

SIVA – Under the SIVA arrangements, exporters receive foreign exchange equivalent to 15 per cent. of the f.o.b. value of their exports. The exchange may be freely negotiated, once only, through the foreign exchange banks.

Import Duties

Import Duties of 0 per cent., 20 per cent., 30 per cent. or 100 per cent. are levied according to the essentiality of the commodities.

Inquiries relating to this notice should be addressed to Export Services Branch, Board of Trade, Hillgate House, 35 Old Bailey, London, E.C.4. (Tel. City 5757 Ext. 459).

(*Continued on page* 1135)

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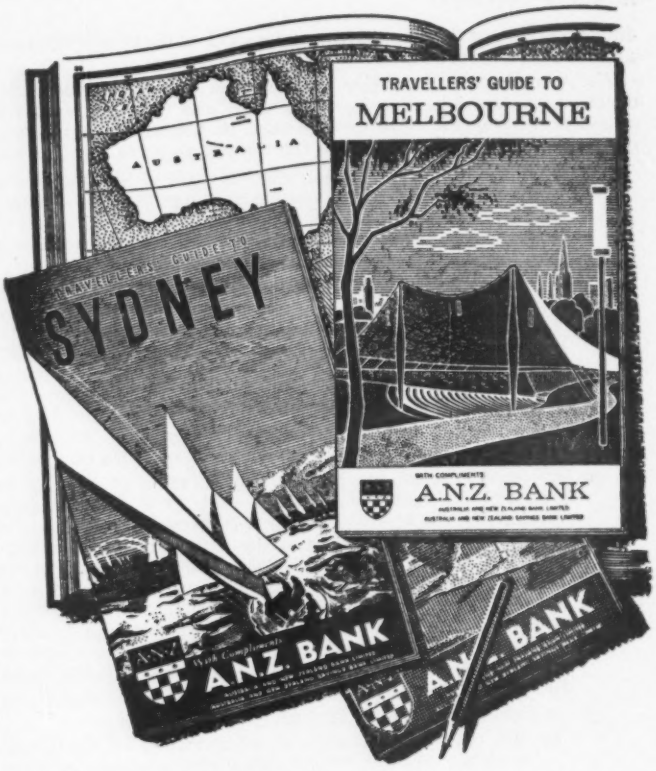

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INDONESIA

Levy of a Special Compulsory Contribution

NEW REGULATIONS imposing a 'special compulsory contribution' (in addition to existing import duties, component levies and the special levy (where applicable)) on motor vehicles imported into Indonesia have recently been announced. A levy of 25 per cent. of the C. and F. value plus insurance and landing charges has to be paid on motor vehicles, trucks and buses designed to carry 14 persons or more; trailers, tanks, sprinklers and sweepers. A levy of 100 per cent. calculated on the same basis has to be paid on all other vehicles. A similar 'special compulsory contribution' on vehicles already in Indonesia has also been introduced. Vehicles imported between September 1, 1962, and December 31, 1962, have to pay **both** special contributions. Exemptions from these levies will however be made in certain circumstances.

At the same time a special compulsory contribution on several kinds of goods was announced, these included beer, distilled alcohol, wine and spirits. It is thought that this levy will be charged with the excise tax.

Inquiries relating to this notice should be addressed to Export Services Branch, Board of Trade, Hillgate House, 35 Old Bailey, London, E.C.4. (Tel. City 5757 Ext. 459).

PAKISTAN

Payments to Government Contractors and Suppliers

A MOVE to clear arrears of payments to Government contractors and suppliers and to ensure that in future no payment by the Pakistan Government falls into arrears is announced in a Press Handout, E. No. 3922 dated September 25. Special units have been set up in the following six heavy spending Departments to this end:

1. Director-General, Investment Promotion and Supplies
2. Director-General, Defence Purchase
3. Food Division
4. Audit Officer, Industries, Supplies and Food
5. Director-General, Telegraphs and Telephones
6. Pakistan Public Works Department

One of the essential features of this scheme is that the contractors and suppliers have been invited to represent by name to the Heads of Departments concerned in case their payment has been delayed by more than a month and a half. A copy of this reminder should be sent to the Joint Secretary, Efficiency and O. & M. Wing, Block 46-A, Central Secretariat, Karachi-1, who has been charged with the responsibility of ensuring that the Heads of Departments take appropriate steps to make the payment with the least possible delay.

BURMA

Reduction of Customs Duties on Imports of Some Raw Materials

THE GOVERNMENT of the Union of Burma made the following announcement on November 15, 1962, to take immediate effect:

> 'Imported laminated plastic sheets and metal sheets for local button manufacturing industry, cotton tapes sliders and stoppers and aluminum and brass wire for zip manufacturing industry, and steel hoops for household hardware manufacturing industry are exempted from so much of Customs duty as is in excess of 10 per cent. of what is leviable on them, provided the Directorate of Industries recommends that such raw materials are for industrial purposes.'

Issue of Import Licences

The Directorate of Imports and Exports of the Government of the Union of Burma has announced that import licences were issued on November 14, 1962, for the import of toilet requisites from any country for the shipping period ending April 30, 1963.

CEYLON

Import Trade Control

IMPORT Trade Notice No. 3, dated November 10, 1962, issued by the Ceylon Controller of Imports and Exports, announces that the issue of licences for all 'essential imports' will commence in December 1962. The licensing scheme and the import control procedure relating to these imports will be announced in due course.

Special arrangements have been made to issue licences to 'Actual Users' and regular importers for the following items, the importation of which can be urged on grounds of essentiality and extreme urgency:

(a) Industrial raw materials;
(b) Chemical elements and compounds;
(c) Machinery and component parts thereof;
(d) Medicinal herbs and pharmaceutical raw materials;
(e) Scientific and medical instruments and appliances;
(f) Any other items of 'essential imports' for which an order on the foreign supplier has to be placed before December 20, 1962.

The indent licensing procedure (details of which were published in the *Board of Trade Journal* dated August 3, 1962, page 291) will apply to all such cases.

'Actual User' imports – manufacturing industries

(i) A special Import Control Unit (temporary) has been set up at the Office of the Director, Development Division (Ministry of Industries, Home, and Cultural Affairs) No. 48, Sri Jinaratana Road, Colombo 2, for licensing urgent indents for industrial raw materials and other essential requirements of the manufacturing industries;

(ii) With regard to industrial raw materials, licences will be issued only for the immediate needs of the industry. With regard to machinery and equipment, preference in the issue of licences, will be given to imports on the basis of deferred payment terms or other concessionary credit arrangements with foreign suppliers.

Imports by the Trade

A special Unit of the Department of the Controller of Imports and Exports will license all other orders for goods which conform to the conditions of essentiality and urgency set out above.

Applicants for import licences must provide, where applicable, the following information along with their indents:

(a) Quantity and the value of imports during 1962;
(b) stocks in hand;
(c) special reasons in support of application.

CHILE

Modifications to Import Lists

THE FOLLOWING AMENDMENTS have been made to Chile's List of Permitted and Prohibited Imports, published in the *Board of Trade Journal* of July 7, page 50, *et seq:*

Section	Group	Item	Percentage of surcharge	Deposit Category
II	6	Cuttings, leaves and roots of medicinal plants, quinine, ipecacuanha and quassia for scientific experiment and research	30	E
IV	17	Coffee beans	2	A
IX	46	Simple medicinal oils	30	B
X	57 & 58	Mechanisms for movements and brakes for Venetian blinds of the metallic head type	200	C
XI	61	Spare parts for equipment, machinery, cranes, tackle and wheeled carriers for loading and stacking goods	30	A
		Spare parts and accessories for industry	30	A
		Spare parts for equipment, machinery and elements for the constructional industry	30	A
		Spare parts for tools	30	A
	62	Cast iron pistons	30	A
		Spare parts for explosion and internal combustion engines	30	A
		Spare parts for steam and water turbines	30	A
		Spare parts for electric motors	30	A
	63	Electric cell and battery chargers	20	B
XII	64	Ambulances with all elements and accessories needed for their specific uses	200	F
	66	Brake linings in any form	20	C
		Spare parts for taximeters	30	A
		Spare parts for motor vehicles	30	C
XIII	75	(RTM) Cellophane paper in bobbins of not more than 25 cms. width	100	D
	79	Photographic plates and films	100	C

ARGENTINA

Modifications to Import Lists

ARGENTINE GOVERNMENT DECREES Nos. 9984, 9990 and 9991 of September 27, 1962, make the following amendments to the lists attached to Decree No. 5439/59 (see *Board of Trade Journal* of May 29, 1959, page 1278):

DECREE NO. 9984

Tariff Nos. 1799/802 – Horizontal and Universal milling machines with table size more than 1,250 x 250 mm. and up to 1,500 × 300 mm. and milling length up to 1,000 mm.

Tariff No. 1799/802 – Tandem rollers up to 6 tons.

The above two items are hereby removed from List 6 Section 'A' (100 per cent. surcharge).

Tariff No. 1799/802 – Pedestal milling machines, universal, vertical and horizontal, with table size up to 1,250 x 250 mm. excluding those with motorized vertically retractable heads in working process and table with longitudinal transversal rotary displacement of 360°

The above item is hereby removed from List No. 6 Section 'B' (150 per cent. surcharge).

Tariff No. 1799/802 – Horizontal and Universal milling machines for die and tool makers with rectangular table which cannot be dismantled or tilted sideways or forward, of up to 1,700 mm. long and/or up to 350 mm. wide and/or up to 460 mm. of vertical stretch and/or up to 1.200 mm. longitudinal run, manual or not and/or up to 3,000 kg. nett weight with normal accessories, provided that two of the afore mentioned parameters are not exceeded; with or without copying device as an additional accessory; those without automatic pre-selection of spindle speed; those without mechanism for milling with or against advance; those without automatic work cycle, composed of: start, approach, work and return to initial position.

Tariff No. 1799/802 – Vertical milling machines with rectangular table of up to 1,800 mm. long and /or up to 400 mm. wide and/or 3,800 kg. nett weight with normal accessories, provided that none of the afore mentioned parameters are exceeded; with or without copying devices as as dismountable accessory, with manual or non-manual displacement; those without automatic preselection of spindle speed; those without automatic work cycle; composed of: start, approach work and return to initial position; those without vertical swiveling head in two or more directions.

Tariff No. 1799/802 – Tandem rollers of up to 6 tons nett weight, without overload.

The above three items are hereby included in List No. 6 Section 'A' (100 per cent. surcharge).

Tariff No. 1799/802 – Crankshaft of 13 pins and more than 91 kg. in weight for diesel Kaeble engine.

This item is hereby included in List No. 2 (20 per cent. surcharge).

Tariff No. 1799/802 – Centreless grinders of up to 100 mm. inclusive.

The following exclusions are hereby incorporated to this item in List No. 6 Section 'B' (150 per cent. surcharge):

'excluding those with work capacity of 0 to 40 mm. diameter with automatic feed, of high production and devices for functioning under automatic cycle, 'Diversimatic' type or similar, which should have all these conditions.'

DECREE NO. 9990

Tariff No. 2327 *bis* – Special cells and batteries, rechargeable or not, for prosthesis hearing aid apparatus, only.

The text of this item in List No. 3 (40 per cent. surcharge) is hereby modified to read as follows:

'Special cells and batteries rechargeable or not, for prosthesis apparatus of 1½ volts and following dimensions: height, between 4.9 and 6 cm. and diameter, between 1.4 and 3.5 cm.

Tariff No. 1155 – hatch needles for knitting machines, excluding bearded needles for knitting machines.

This item is hereby removed from List No. 3 (40 per cent surcharge).

Tariff No. 1155 – Bearded needles for knitting machines, gauge 48 and finer.

This item is hereby removed from List No. 4 (100 per cent. surcharge).

Tariff No. 1155 – Hatch and bearded needles for knitting machines.

This item is hereby included in List No. 3 (40 per cent. surcharge).

Tariff No. 4587 *bis* – Liquid with composition based on phenylmercury acetate and potassium 2:4 6 – trichlorophenoxide, combined content not less than 60 per cent.

This item is included in List No. 3 (40 per cent. surcharge).

Tariff No. 4303 – Anhydrous aluminium chloride.

This item is hereby incuded in List No. 2 (20 per cent. surcharge).

Tariff No. 4587 *bis* – Tributyl – 2:4 – dichlorobenzylphosphonium chloride in concentrations not less than 10 per cent.

This item is included in List No. 3 (40 per cent. surcharge).

Tariff No. 3614 – Cellulose acetate strip, not plasticised, made from continuous fibre of from 5 to 8 denier and crimped for the manufacture of cigarette filters, only.

This item is hereby included in List No. 3 (40 per cent. surcharge).

DECREE NO. 9991

Tariff No. 1799/802 – 1480 – Refrigerating motor-compressors, hermetically sealed (motor and compressor encased in the same metal casing) using 'Freon' type regrigerants, from 30.001 up to 60.000 frigories/hours. (Conditions 'standard' measurement of + 4·4°C. induction temperature and + 40°C. condensation temperature, measured with 'Freon 22' gas.)

This item is hereby included in List No. 6 Section C (40 per cent. surcharge).

Tariff No. 1799/802 – 1480 – Hermetically sealed refrigerating motor – compressors (motor and compressor encased in the same metallic casing) using freon type refrigerants of up to 16,000 frigories/hours. (Conditions 'standard' measurement of +4·4°C. induction temperature and +40°C. condensation temperature measured with 'Freon 22' gas.).

Tariff No. 1799/802 – 1480 – Compact equipment for air-cooling and dehydration with total cooling capacity of less than 10 h.p. or less than 10 ton normal refrigeration.

Tariff No. 1799/802 – 1480 – Condenser equipment for air-conditioning with compressor or motor-compressor, condenser and corresponding controls with total cooling capacity of up to 50 ton. (Conditions 'standard' measurement of 4·4°C. induction temperature and +40°C. condensation temperature, measured with 'Freon' 22 gas.)

Tariff No. 1799/802 – 1480 – Equipment for cooling liquids with one or more compressors or motor-compressors with condenser, cooler and corresponding controls, with total cooling capacity of up to 50 tons. (Conditions 'standard' measurement of +4·4°C. induction temperature and +40°C. condensation temperature, measured with 'Freon' 22 gas.)

The above four items are hereby included in List No. 6 Section 'B' (150 per cent. surcharge).

Tariff No. 1799/802 – 1480 – Hermetically sealed motor-compressors (motor and compressor encased in the same metal casing) using 'Freon' type refrigerants, from 16.001 up to 30,000 Frigories/hours. (Conditions 'standard' measurement of +4·4°C. induction temperature and +40°C. condensation temperature, measured with 'Freon 22' gas.)

Tariff No. 1799/802 – 1480 – Compact equipment for air cooling and dehydration with total cooling capacity from 10 h.p., up to less than 20 h.p. or from 10 ton up to less than 20 ton normal refrigeration.

The above two items are hereby included in List No. 6 Section 'A' (100 per cent. surcharge).

Tariff No. 1799/802 – 1480 – 'Freon' refrigerating compressors of up to 30.000 frigories.

The following is hereby incorporated to this item in List No. 6 Section 'B' (150 per cent. surcharge). '(Conditions "standard" measurement of +4·4°C. induction temperature and +40°C. condensation temperature, measured with "Freon 12" gas.)'

Tariff No. 1799/802 – 1480 'Freon' refrigerating compressors of more than 30·000 frigories and up to 60·000 frigories.

The following is hereby incorporated to this item in List No. 6 Section A' (100 per cent. surcharge). '(Conditions "standard" measurement of +4·4°C. induction temperature and +40°C. condensation temperature, measured with "Freon 12" gas.)'

DECREE NO. 10650

Tariff No. 1799/802 . Bottle labelling machines.

This item is hereby removed from List No. 6 Section 'B' (150 per cent. surcharge).

Tariff No. 1799/802 . Labelling machines for glass containers, excluding automatic machines for labelling and printing simultaneously glass bulbs, with a labelling capacity of more than 1,800 units per hour.

This item is hereby included in List No. 6 Section 'B' (150 per cent. surcharge).

Tariff No. 1799/802 . Manual machines for electric arc welding; machines for electric welding - spot, seam, butt and projection; and automatic machines for electric arc welding of less than 600 amps. at a working load of 60 per cent.

The text of this item in List No. 6 Section 'B' (150 per cent. surcharge) is hereby modified to read as follows:

'Manual machines for electric arc welding; machines for electric welding - spot, seam, butt or projection; automatic machines for electric arc welding of less than 600 amps. at a working load of 60 per cent.; excluding electric welding machines for saw bands with a welding capacity exceeding 16 mm. wide and clamps ('mordazas') of more than 24 mm. wide.

PERU

Amendments to Import Duties

PERUVIAN Decree Law No. 14230 of November 3, imposed an additional tax of 150 per cent. *ad valorem* c.i.f., on imports under the following items of the Peruvian Customs Tariff:

Item	Description
2336	Crude cast iron, and cast iron in pigs, lumps or ingots.
2341	Bars, plates and rods of iron or steel, unpolished, of any cross section, thickness or length, not drilled.
2342	Bars and rods of iron or steel, folded, distorted or twisted, for buildings.
2347	Angular beams of iron or steel, neither drilled nor otherwise prepared, in T, double T, V, U, H, I. and cross form.
2350	Iron or steel wire of more than ½ millimetre in diameter, galvanized or not, including wire prepared for baling.
2353	Wire and rods of common iron or steel, prepared for autogenous welding and metallization.
2354	Wire and rods of iron or steel alloys, prepared for autogenous welding and metallization.
2355	Iron or steel wire, not elsewhere specified or included.
2356	Iron wire, barbed.
2371	Plates or sheets of iron coated with lead or zinc (galvanized), flat or corrugated, also gutterings and ridges for the clearance of water from roofs.

This new rate of tax replaces the additional 50 per cent. tax formerly imposed on Items 2341, 2342, 2350 and 2356.

NOTE:

The Peruvian Customs Tariff comprises both *ad valorem* and 'specific' rates of duty, and it should be noted that other specific charges may be payable in addition to the above *ad valorem* tax. Similarly the tariff amendments published in the *Board of Trade Journal* of November 16, page 1035) refer to 'specific' rates only and do not affect existing *ad valorem* duties.

BRITISH GUIANA

Customs Tariff Amendment

THE CUSTOMS DUTIES (Amendment) Order, 1962 amends item 533-03.2 of Part I of the British Guiana Customs Tariff as follows:

No.	Goods	Preferential Tariff	General Tariff
533-03.2	Paints and enamels	20%	30%

Inquiries about the above notice should be addressed to the Export Services Branch (Tariff Section) Board of Trade, Hillgate House, 35 Old Bailey, London, E.C.4. (Tel. City 5757, Ext. 471).

NICARAGUA

Regulations about Prior Deposits on Imports

BY DECREE No. 30 of November 9, 1962, published in the Nicaraguan *La Gaceta* on November 13, 1962, the prior deposit of local currency in respect of imports classified in Import List No. II (semi-essential goods) has been reduced from 90 per cent. to 40 per cent. *ad valorem*.

The prior deposit in respect of goods classified in Import List No. I (essential goods – 'Nil') and Import List No. III (non-essential goods – 100 per cent. *ad valorem*) remains unchanged.

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MIDLANDS

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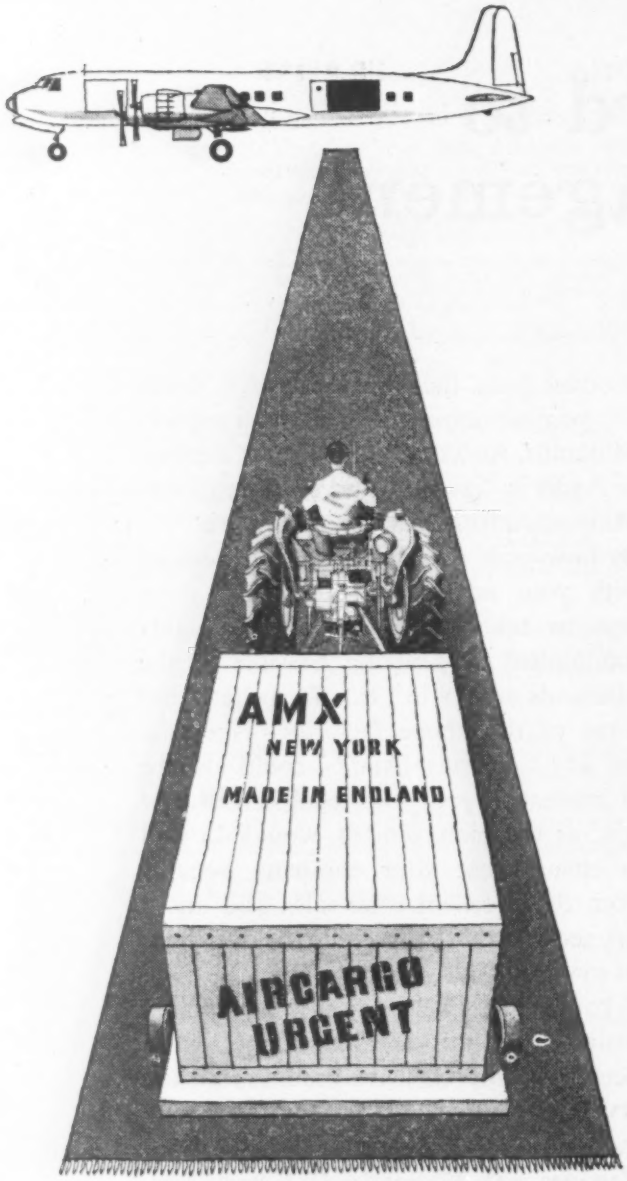

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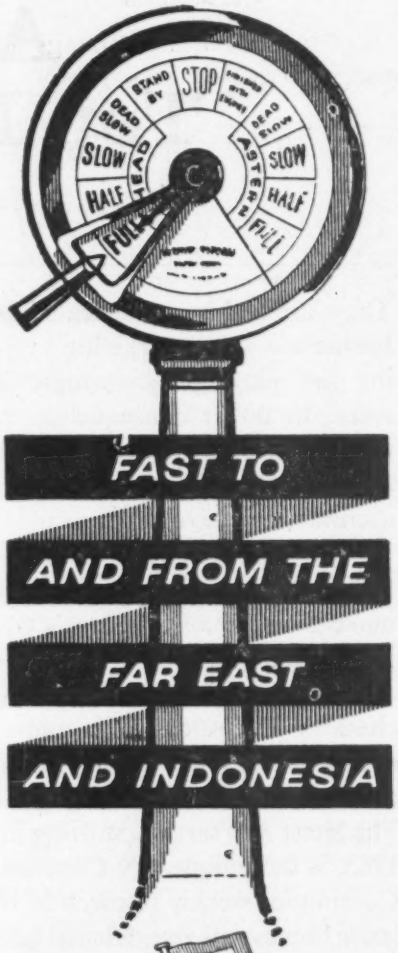

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CANADA

'Made in Canada' Rulings

THE FOLLOWING rulings have been made for Customs purposes:

Of 'a class or kind made in Canada':

Hydraulic hoists, designed for mounting on motor truck chassis to load, unload or dump over the rear of the vehicle detachable containers for bulk materials, such as industrial wastes or refuse. (Ruling effective December 12, 1962).

Oil Furnace Carbon Blacks, except Super abrasion Furnace (SAF) and Fine Furnace (FF) grades.

NOTE: The following grades of oil Furnace Carbon Blacks have previously been ruled of a class or kind made in Canada:

High Abrasion Oil Furnace Carbon Black (HAF)

Fast Extrusion Oil Furnace Carbon Black (FEF)

Medium Abrasion Oil Furnace Carbon Black (MAF)

Intermediate Super Abrasion Oil Furnace Carbon Black (ISAF)

General Purpose Oil Furnace Carbon Black (GPF)

Semi-Reinforcing Oil Furnace Carbon Black (SRF). (Ruling effective December 13, 1962).

The above information is contained in Canadian Department of National Revenue Memoranda Series D51-14-1, dated November 20, 1962, and D51-31-2, dated November 21, 1962.

Customs Tariff Amendment

THE CANADIAN GOVERNMENT has issued Order in Council P.C. 1962-1639, dated November 15, which amends the customs duties applicable to tariff item 23a, as published in the *Board of Trade Journal* of September 14 (page 595), as follows:

Tariff Item		British Preferential Tariff	Most-Favoured-Nation Tariff	General Tariff
23a	Cocoa paste or liquor and chocolate paste or liquor, not sweetened, other than in blocks, cakes or powder, for use in Canadian manufactures.....and, per pound (Expires June 30, 1963).	10%	20%	35% 2½ cts.

UNITED STATES

Import Duty on Dried or Bleached Grasses and Plants

PUBLIC LAW 87-878, which was approved by the President of the United States on October 24, 1962, provided for the duty-free entry, from that date, of 'natural grasses, grains, leaves, plants, shrubs, herbs, trees, and parts thereof, not specially provided for, not further advanced than bleached.' Such materials are deleted from the provisions of paragraph 1518 (a) the Tariff Act of 1930 and added to paragraph 1722 in the Free List.

A copy of the Act may be seen at Export Services Branch (Tariff Section), Board of Trade, Room E.49, Hillgate House, 35 Old Bailey, London, E.C.4.

BRAZIL

Remittance of Profits Law

THE *Board of Trade Journal* of November 2, page 920, reported the main provisions of Law No. 4131 which controls the investment of foreign capital in Brazil and the remittance of profits abroad. Article 14 of the Law was said to prohibit royalty payments between companies in Brazil and their head offices abroad. It is however only those royalty payments in respect of patents and trade marks which are prohibited by Article 14, the full translation of which is:

> 'Remittances for the payment of royalties for the utilization of patents of invention and of industrial or commercial trade marks will not be permitted between branch offices or subsidiaries of companies established in Brazil and their head office abroad, or when the majority of the capital of the company in Brazil belongs to those receiving the royalty abroad.'

An English translation of the complete law may be seen at the Export Services Branch, Board of Trade, Room E.46, Hillgate House, 35 Old Bailey, London, E.C.4. (Tel. City 5757, Ext. 476).

FRANCE

Electrical Equipment

THE FRENCH *Journal Officiel* of November 8, 1962, published a decree forbidding the manufacture (for sale on the home market), the installation and the sale of certain monophase electrical apparatus which cannot function on 220 volts A.C. with or without the use of a transformer.

The appliances covered by this decree are irons, excluding those with shrouded elements or steam irons; sewing machines for use in the home and in industry, excluding those for use by craftsmen; single speed fans and extractors; and single or multi-speed ceiling fans.

The ban on the manufacture of these articles will come into force on January 1, 1963, the ban on their installation and sale, with the exception of the fans and extractors, on January 1, 1964, and the ban on the installation and sale of the fans and extractors on October 1, 1964.

EUROPEAN ECONOMIC COMMUNITY

Harmonization of Laws and Regulations Relating to Pharmaceutical Products

THE EUROPEAN Economic Commission has announced that a draft directive on the harmonization of laws and regulations in the Common Market countries concerning pharmaceutical products has been submitted to the Council of Ministers of the European Economic Community.

The draft directive deals with the conditions under which licences for sale of branded pharmaceuticals should be granted and also outlines uniform regulations on labelling.

IRISH REPUBLIC

Import Quotas for Filament Lamps and Cotton Piece-goods

THE IRISH AUTHORITIES have announced the following quotas under the Control of Imports Acts, 1934 and 1937, for the period December 1, 1962, to November 30, 1963:

Goods	Quota	Quota No.
Certain electric filament lamps	100,000 articles	31
Certain woven cotton piece-goods	2,700,000 square yards	45

Amendment

Issue of New Customs and Excise Tariff Based on the Brussels Nomenclature

THE FOLLOWING amended paragraph (b) should be substituted for the one relating to the Irish Republic published on page 1092 of the *Board of Trade Journal* dated November 23, 1962:

(b) to revoke all existing customs duties (other than those on tobacco, beer, spirits, certain hydrocarbon oils and wine) and to reimpose the duties with certain modifications, within the Nomenclature classification. Some duties which could not be provided for within the Nomenclature classification are also reimposed by the Order *viz.*, the duty on bottles or jars of glass, full (T.R. No. 32), the duty on electro-plated articles (T.R. No. 79/5) and Package duty (T.R. No. 166).

MALTA

Importation of Frozen Sausages

THE MALTA *Government Gazette* dated November 16, 1962, contains a notice which states that the Acting Director of Industrial Development will receive applications for licences for the importation of frozen sausages under the usual conditions from importers who were given an allocation last year. Applications for licences must be made before noon on December 1, 1962.

ITALY

International Transport of Goods

IN A LAW dated August 12, 1962, Italy has ratified the Customs Convention of January 15, 1959, signed at Geneva, relating to the international transport of goods in sealed road vehicles covered by the T.I.R. carnet.

REPUBLIC OF SOUTH AFRICA

Proposed Specifications for Flameproof Enclosures for Electrical Apparatus

THE FIRST SECRETARY (Commercial) at Pretoria has reported that the South African Bureau of Standards has issued a proposed revised specification for flameproof enclosures for electrical apparatus.

The Bureau invite comments on these specifications for consideration by the Technical Committee.

Anyone wishing to inspect the specifications should write to the Commercial Relations and Exports Department, Board of Trade, Horse Guards Avenue, London, S.W.1. quoting reference C.R.E. 193/62.

Customs Tariff Applications

CUSTOMS TARIFF application List No. 322 published as Government Notice No. 812 in the Republic of *South Africa Government Gazette* of November 16, 1962, states that the Board of Trade and Industries has received the following application affecting the Republic's Customs Tariff:

For an increase in duty on:

Glass fibre laminates from 10 per cent. *ad valorem* to 25 per cent. *ad valorem* (intermediate column) and 35 per cent. *ad valorem* (maximum column).

Note: This application supersedes part of the previous application, namely No. 3 (ii) relating to synthetic and artificial resins compounded with glass fibre, in sheets and all other forms and mouldings, included in Customs Tariff were published in the *Board of Trade Journal* of October 26, 1962 (page 887).

Where British Trade organizations are thought to be interested in the above applications they are being informed, and it is suggested that any British firm wishing to make representations to the South African Board of Trade and Industries and belonging to a trade organization should get into touch with that body in the first instance. Firms proposing to make independent representations to the South African authorities and desiring further information relating to the above, should address their inquiries to the Commercial Relations and Export Department, Board of Trade, Horse Guards Avenue, London, S.W.1 quoting reference C.R.E. 11754/62.

Investigation into the Film Industry

GOVERNMENT NOTICE No. 804 published in the Republic of South Africa *Government Gazette* of November 13, 1962, states that the Minister of Economic Affairs has directed the Board of Trade and Industries to investigate and report on the promotion of the motion picture industry in the Republic of South Africa, with special reference to the following factors:

(i) The adequacy of the existing studio and laboratory facilities in in South Africa and the desirability of providing additional and/or improved facilities and equipment to encourage the production of films by both local and overseas concerns in this country.

(ii) the promotion of the industry by the provision of suitable financial and other assistance, including the appropriate means of raising the necessary funds; and

(iii) any other means of encouraging the development and of overcoming the disabilities attached to the growth of a local film industry in this country.

Interested parties are invited to submit representations in this connection to the Secretary, Board of Trade and Industries, Private Bag 84, Pretoria, within six weeks as from the date of publication of the notice.

LEBANON

Customs Tariff Amendment

THE Lebanese Customs Tariff has been amended as shown below. Additions to the text are given in italics.

Tariff No.	Description	Unit	Rate of Duty	
			New Per cent.	Old Per cent.
05-14	Ambergris, casteorum, civet and musk; cantharides and bile, whether or not dried; animal products, fresh, chilled or frozen, or otherwise provisionally preserved, of a kind used in the preparation of pharmaceutical products	*Ad val.*	Free	25%
15-04	Fats and oils, of fish and marine animals whether or not refined:			
	a – (unchanged).			
	b – cod liver oil	*Ad val.*	Free	11%
15-13	Margarine, imitation lard and other prepared edible fats:			
	a – *Preventative or curative extracts* (1)	*Ad val.*	Free	
	b – (unchanged).			
16-02	(main heading unchanged).			
	a – *Beef or mutton preserved in hermetically sealed tins, other than meat with macaroni, spaghetti and the like*	*Ad val.*	Free	25%
	b – other	*Ad val.*	25%	
16-04	(Main heading unchanged).			
	a – (unchanged).			
	b – *Tunny and sardines in hermetically sealed tins*	*Ad val.*	Free	
	c – other	*Ad val.*	25%	
19-06	Communion wafers, empty cachets of a kind suitable for pharmaceutical use, sealing wafers, rice paper and similar pr ducts:			
	a – Empty cachets of a kind suitable for pharmaceutical use	*Ad val.*	Free	11%
	b – (unchanged).			
21-06	(Main heading unchanged).			
	a – Natural yeasts (active or inactive)	½ Kg.	40 piastres	
		The dut y not to be		less than
		Ad val.	50%	25%
	b – others	*Ad val.*	25%	...
30-01	Organo-therapeutic glands or other organs . . . not elsewhere specified or included	*Ad val.*	Free	1%
30-03	Medicaments (including veterinary medicaments)	*Ad val.*	Free	
30-04	Wadding, gauze, bandages and similar articles . . . other than goods specified in Note 3 to this Chapter:			
	a – Wadding and gauze, not impregnated or coated with pharmaceutical substances	*Ad val.*	25%	40%
	b – other	*Ad val.*	Free	11%
30-05	Other pharmaceutical goods	*Ad val.*	Free	11%
33-05	Aqueous distillates and aqueous solutions of essential oils, including such products suitable for medical uses:			
	a – Medicinal (1)	*Ad val.*	Free	11%
	b – (unchanged).			
36-01	(Main heading unchanged).			
	Monopoly products:			
	a – *For mines*	*Ad val.*	25%	
	b – others	*Ad val.*	60%	
42-02	(Main heading unchanged).			
	a –)	(un-	(un-	
	b – ∫	changed)	changed)	
	c – *of artificial plastic sheeting*	*Ad val.*	40%	
	d – other	*Ad val.*	25%	
44-05	Wood sawn lengthwise, sliced or peeled, of a thickness exceeding 5 mm.:			
	a – White pinewood, sawn or sliced, imported in boards of a length of 205 cm. and less, of a width of 30 cm. and less, and a thickness of 78 mm. and less, intended for the manufacture of fruit-packing cases		Free	
	b – *Yoke-elm*		Free	
	c – other	*Ad val.*	15%	
48-01	(Main heading and sub-headings a to c unchanged).			
	d – Newsprints for other publications or purposes and other printing paper than newsprints, weighing 200 grammes and less per square metre:			
	1 – *In large rolls unusable until cut*	*Ad val.*	8%	11%
	2 – other	*Ad val.*	11%	
	(The rest unchanged)			
48-07	(Main heading and sub-headings a to d unchanged).			
	e – other:			
	1 – *Carbon paper in large roll unusable until cut*	*Ad val.*	8%	25%
	2 – other	*Ad val.*	25%	
58-08	Tulle and other net fabrics (but not including woven, netted or crocheted fabrics), plain:			
	a – intended for fishing, manufactured from threads included in tariff headings Nos. 50 to 57	*Ad val.*	11%	
	b – other:			
	1 – *of silk, waste silk other than noil or of noil silk; of man-made fibres*	*Ad val.*	40%	25%
	2 – *of other textile materials*	*Ad val.*	25%	
82-14	(Main heading unchanged).			
	a – without handles	*Ad val.*	Free	
	b – other:			
	1 – *of base metal, gilt or silvered*	*Ad val.*	30%	25%
	2 – other	*Ad val.*	25%	

(*Continued on next page*)

Lebanon (*Continued*)

Tariff No.	Description	Unit	Rate of Duty New Per cent.	Rate of Duty Old Per cent.
84-22	(Main heading unchanged).			
	a – Electric lifts	*Ad val.*	25%	15%
	(The rest unchanged).			
84-34	(Main heading unchanged).			
	a – (sub-heading unchanged)	*Ad val.*	25%	
	b – *Other printing blocks*	*Ad val.*	11%	1%
	c – other	*Ad val.*	1%	
85-24	(Heading unchanged).			
	a – *Electrodes for industrial electric furnaces, made of carbon or graphite*	*Ad val.*	Free	25%
	b – other	*Ad val.*	25%	
93-04	(Main heading unchanged).			
	a – *Sporting guns and rifles, including guns for duck-shooting*	*Ad val.*	60%	25%
	Reconstruction Tax	*Ad val.*	5%	
	b – other	*Ad val.*	25%	
	Reconstruction Tax	*Ad val.*	5%	
93-06	(Main heading unchanged).			
	a – (unchanged).			
	Prohibited.			
	b – other:			
	1 – *For sporting guns and rifles, including guns for duck-shooting*	*Ad val.*	60%	25%
	Reconstruction Tax	*Ad val.*	5%	
	2 – Other	*Ad val.*	25%	
	Reconstruction Tax	*Ad val.*	5%	
93-07	(Main heading unchanged).			
	a – For military purposes		(unchanged)	
	Prohibited.			
	b – other			
	1 – *Sporting cartridges, loaded or empty, with case and wadding*	*Ad val.*	60%	25%
	2 – other	*Ad val.*	25%	
97-04	(Main heading unchanged).			
	a – (heading unchanged)	*Ad val.*	100%	50%
		The duty not to be less than per pack	*75 piastres*	
	Reconstruction Tax	Per pack	10 piastres	
	b – other (unchanged).			

Inquiries about this notice should be addressed to Export Services Branch, Board of Trade, Hillgate House, 35 Old Bailey, London, E.C.4. (Tel. City 5757, Ext. 468 or 469).

NIGERIA

Customs Amendment—Cinematograph Film

LEGAL NOTICE 152/62 published in the Official Nigerian *Gazette* of November 8, 1962, gives details of the Customs (Importation of Positive Cinematograph Film) (Amendment) Order, 1962, which amends the Customs (Importation of Positive Cinematograph Film) Order, 1959, Section 2 (Legal Notice 83/59) and authorizes the Board of Customs and Excise, if satisfied, to permit the temporary importation, without payment of duty, of the following:

'Positive cinematograph films intended for advertising, educational and scientific purposes or for exhibition at international fairs, trade shows and similar events'.

This amendment is operative from October 1, 1962.

KENYA

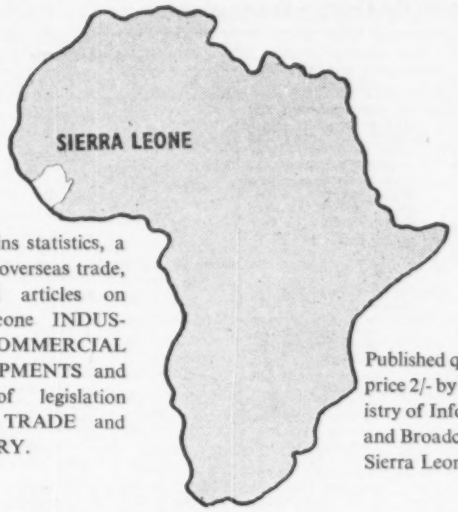
Remission of Duty on Bacon

LEGAL NOTICE No. 537 published in the Kenya *Government gazette* of November 6, 1962 provides for the remission of the whole of the import duty payable on bacon imported into Kenya on or after November 1, 1962.

Opportunities in Retail Selling

'Retail Selling', a revised booklet in the 'Choice of Careers' series issued by the Central Youth Employment Executive, surveys the development of retail shops and discusses selling techniques. The booklet describes methods of recruitment and training, and the opportunities for careers for boys and girls who leave school at different ages and for those who have been to a university. A special chapter gives some details of the scope in the trade for higher posts and there is also information about personal qualities and conditions of employment. Copies of 'Retail Selling', No. 75, from H.M. Stationery Office. Price 1s. 6d.

Sierra Leone Trade Journal



. . . contains statistics, a survey of overseas trade, illustrated articles on Sierra Leone INDUSTRIES, COMMERCIAL DEVELOPMENTS and details of legislation affecting TRADE and INDUSTRY.

Published quarterly, price 2/- by the Ministry of Information and Broadcasting in Sierra Leone.

Subscription: Crown Agents for Overseas Government and Administration, 4 Millbank, London, S.W.1., or Mr. A. J. E. Davis, the Crown Agents Representative, 3100 Massachusetts Avenue, N.W. Washington.

Advertising: details and specimen copies from Africa & Overseas Press Agency Ltd., 13 New Bridge Street, London, E.C.4.

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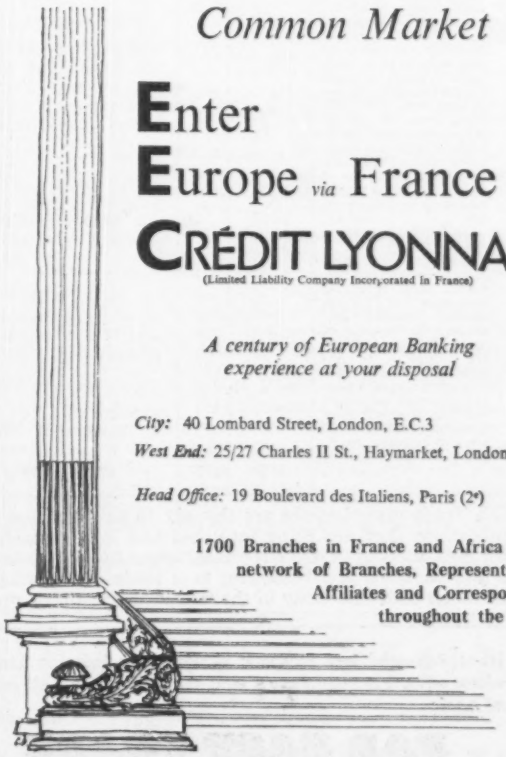

FEDERATION OF RHODESIA AND NYASALAND

Customs Tariff Applications

THE BRITISH TRADE COMMISSIONER at Salisbury has reported that the Ministry of Commerce and Industry has received applications for an increase in the Customs duties applicable to the following commodities.

Britain pays the Column D rate of duty.

Tariff Item	Description of Commodity	Rates of Duty A	B	C	D
1 14 (1)	Present tariff wording and rates of duty: Confectionery: plain and fancy, of all kinds, compounded, made or preserved with sugar, sweetened chocolate, n.e.e., sweet meats, crystallized fruits, candied or preserved ginger and chow chow . . *ad val.* or per lb.	30% £0 0s. 7½d. which	20% £0 0s. 5d. ever duty sh	20% £0 0s. 5d. all be the gr	10% £0 0s. 2½d. eater
	Proposed Tariff wording and rates of duty: (1) Confectionery: plain or fancy, of all kinds, compounded, made or preserved with sugar, sweetened chocolate, n.e.e., sweetmeats, crystallized fruits, candied or preserved ginger and chow chow: (a) Sweetened chocolate, slabs *ad val.* or per lb.	30% £ 0s. 7½d. whichever	20% £0 0s. 5d. duty shall	20% £0 0s. 5d. be the gr	10% £0 0s. 2½d. eater
	(b) Other . *ad val.* or per lb.	30% £0 0s. 10d. whiche	20% £0 0s. 7½d. ver duty sh	20% £0 0s. 7½d. all be the g	10% £0 0s. 5d. reater
2 119(1) (b)	Present Tariff wording and rates of duty: Transformers, core type, oil immersed (including earthing compensators and reactors but not including transductors, chokes, automatic voltage regulators, rectifier-transformers and starter transformers) of up to a maximum working voltage of 17·5 kilovolts: earthing compensators and reactors of a maximum working capacity of not less than 5 kilovolt-amperes and other transformers in a range from a minimum size of 5 kilovolt-amperes maximum working capacity to a maximum size of 1,500 kilovolt-amperes maximum working capacity . . *ad val.*	35%	25%	15%	15%
	Proposed Tariff wording and rates of duty: Transformers, earthing compensators, and reactors, core type, oil immersed (but not including rectifier and starter transformers) of up to a maximum working voltage of 40 kilovolts in a range from a minimum size of 5 kilovolt-amperes maximum working capacity to a maximum size of 5,000 kilovolt-amperes maximum working capacity *ad val.*	35%	25%	15%	15%

Where British Trade organizations are thought to be interested in the above applications they are being informed and it is suggested that any British firm desiring to make representations to the Ministry of Commerce and Industry and belonging to a trade organization, should get into touch with that body in the first instance. Firms proposing to make independent representations to the Federal Authorities and desiring further information relating to the above should address their inquiries to the Commercial Relations and Exports Department, Board of Trade, Horse Guards Avenue, London, S.W.1, quoting reference (1) C.R.E. 13164/62; (2) C.R.E. 13165/62. The closing date for the receipt of representations by the Federal Ministry of Commerce and Industry is December 28, 1962.

Suspension of Duty

FEDERAL GOVERNMENT Notice No. 343 published in the Federation of Rhodesia and Nyasaland *Government Gazette* of November 16, 1962, amends, with effect from that date, the existing list of suspensions of duty by the insertion of the following items:

Item	Effective Rate of Duty Duty A	Duty B	Duty C	Duty D
32 (b) (i) Skimmed milk powder in packages exceeding ten pounds in weight per lb.	£0 0s. 3d.	£0 0s. 3d.	£0 0s. 2d.	£0 0s. 2d.
Ex 331 (2) Metal welding electrodes, n.e.e. *ad val.*	10%	5%	Free	Free

A.E.I. AT LAGOS FAIR

Sir Abubakar Tafawa Balewa (left) Prime Minister of the Federation of Nigeria and Sir Ahmadu Bello, Premier of the Northern Region of Nigeria, listening to a description by telephone of the world-wide activities of the Associated Electrical Industries, Ltd., of London at the Nigerian International Trade Fair in Lagos. By dialling a number visitors to the British Pavilion could hear a recording of the Company's activities in five languages – Yoruba, Ibo, Hausa, English and French. (see page 1118 for a report on the Fair).

Non-Ferrous Metals Directory

The British Non-Ferrous Metals Federation has published a new edition of its Directory. It gives full details of the products manufactured by its member companies and includes a buyers' guide listing all principal types of copper, copper alloy, nickel and zinc semi-manufactures and the companies able to supply them. Other sections deal with trade names in use by member companies and with the industry's research, development and statistical organizations. Copies are available on request from the Federation at 6 Vicarage Road, Birmingham, 15.

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GOVERNMENT OF QATAR

Tenders for the supply and installation of Telephone Equipment for a Main Exchange in Doha, Qatar, Arabian Gulf.

TENDERS are invited for the supply and installation of Exchange Equipment for 3,500 lines to extend the existing 2,300 line Equipment to form a new 5,800 line Main Exchange. Transfer to the new building, installation and interconnection of the existing equipment is to form part of the tender.

Specifications and drawings are available on payment of a Fee of £5 sterling from the Consultants: Cable and Wireless Limited, Mercury House, Theobalds Road, London, W.C.1. This Fee will be refunded provided a bona fide Tender is lodged and not withdrawn. Extra copies of the Specification (with Drawings) will be supplied at £2 2s. 0d. each which will not be returnable. Cheques should be made payable to Cable and Wireless Limited and marked 'Doha Telephone Account.'

The original Tender in a sealed envelope marked 'Tender for Doha Exchange' and endorsed with the name and address of the Tenderer must reach the Contracts Manager, Cable and Wireless Limited at the above address not later than January 25, 1963, and a copy of the Tender must be posted at the same time to the Director-General of the Government of Qatar, Doha, Qatar. Tenders by post should be registered.

The lowest or any tender will not necessarily be accepted.

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ENGINEERING TRANSLATIONS INTO CHINESE by Chinese-born engineers to accompany English descriptions, plus design and layout of literature. Promotion Services offering these facilities has very wide connection with China, and has already served British industry on a wide scale. Laurence French Publications Ltd., 3 Belsize Crescent, London, N.W.3. Tel. Swiss Cottage 4481.

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TENDERS are invited for the development and production of Special High Efficiency Filter Units for a Pass Band of 60-108 Kilocycles, based on possible requirements of 50 or 100 units.

Tenderers will be required to state the earliest date by which development and production could commence and the rate at which the filter units could be manufactured.

Specifications and drawings are available from the Contracts Manager, Cable and Wireless Limited, Mercury House, Theobalds Road, London, W.C.1, England. (Telex.: London 23181, Telegrams: Cablewire London).

Each tender in a sealed envelope marked 'Tender for Through-Group Filters' and endorsed with the name of the tenderer, must reach the Contracts Manager, Cable and Wireless Limited, at the above address, not later than January 11, 1963. Tenders sent by post should be registered.

Cable and Wireless Limited acting on behalf of the Partners in the British Commonwealth Submarine Telephone Cable System does not bind itself to accept the lowest or any tender.

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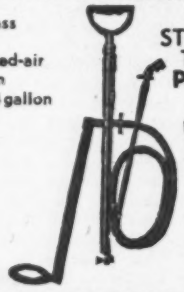

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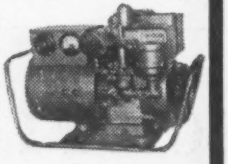

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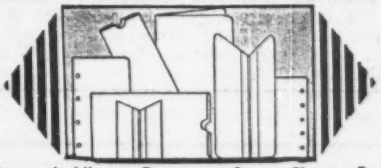

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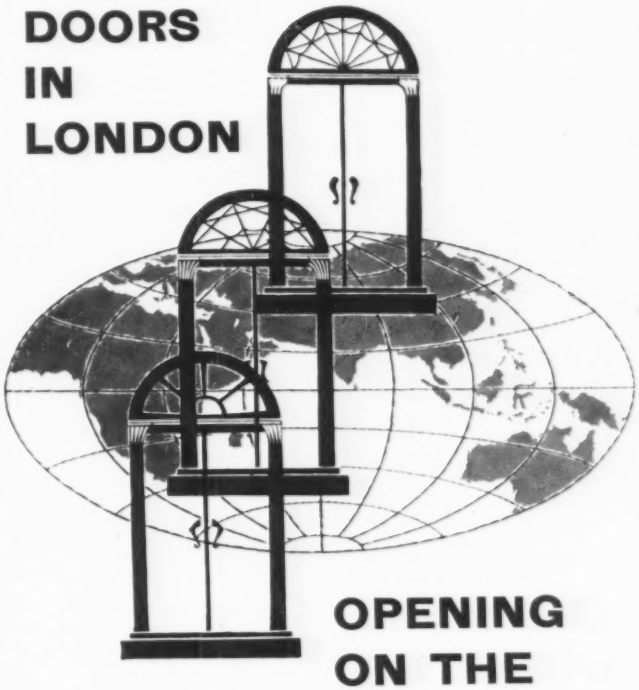

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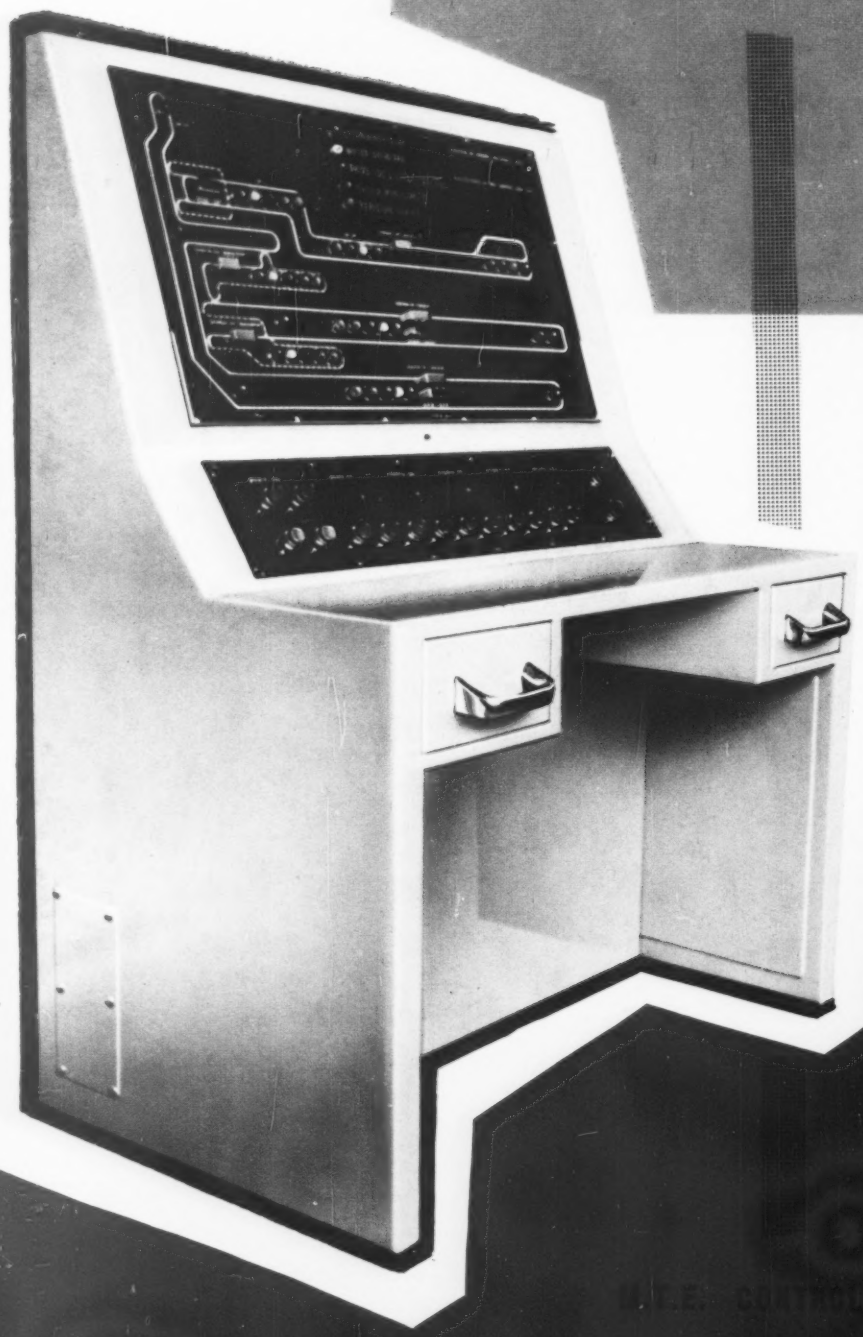

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